

AIR MINISTRY  
DEPARTMENT OF THE DIRECTOR-GENERAL  
OF CIVIL AVIATION

# Civil Aviation

## Statistical and Technical

## Review

## 1937

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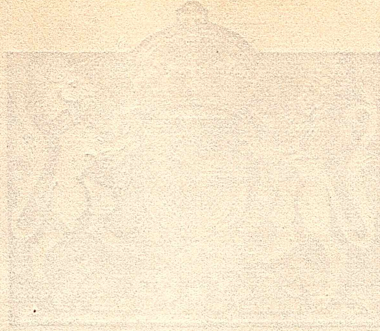
LONDON  
PRINTED AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE  
To be purchased directly from H.M. STATIONERY OFFICE at the following addresses :  
York House, Kingsway, London, W.C.2 ; 120 George Street, Edinburgh, 2 ;  
26 York Street, Manchester, 1 ; 1 St. Andrew's Crescent, Cardiff ;  
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1938

Price 3s. 0d. net







## FOREWORD

This volume contains statistical and technical data and other detailed information which is supplementary to the general information contained in the "Report on the Progress of Civil Aviation, 1937", already published. Copies of the latter may be obtained from H.M. Stationery Office at the addresses on the front cover hereof, or through any bookseller, price 2s. 6*d.* net, or 2s. 9*d.* post free.

Attention is drawn to the fact that owing to the receipt of further information since the publication of the "Report on the Progress of Civil Aviation, 1937", statistics quoted in that volume may differ slightly from those published herein.



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**MAP** (*in pocket inside back cover*).—

Air routes of the British Commonwealth and principal foreign air routes, 1937.



## PART A

### UNITED KINGDOM

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#### SECTION I

#### CIVIL FLYING

##### Notes on the Tables

**Table 1.**—This table summarises the traffic on all services operated by United Kingdom companies, including internal services in the United Kingdom, services between the United Kingdom and the Continent, the Bermuda–New York service, operated by Imperial Airways Ltd., and other services operated by Imperial Airways Ltd. and associated companies on the Empire routes. With the exception of the average length of each stage flight, which remained unchanged, all items recorded show an increase in 1937. The extent of these increases over the corresponding figures for 1936 are exemplified by the following percentages :—Stage flights, 8 ; passengers, mails and freight accepted for transport, 3, 65 and 10, respectively ; aircraft mileage, 12 ; passenger mileage, 21 ; freight ton-mileage, 22 ; mail ton-mileage, 104. Contributory factors to these increases are indicated in the comments given below on Tables 3 (A)–(F) and Table 4, and in the footnotes to these tables.

**Table 2.**—The statistics in this table relate to commercial flights between England and the Continent, comprising both scheduled and special charter flights by British and foreign aircraft. The latest figures again show a general increase in traffic. The total number of passengers carried (159,125) was greater by 10 per cent than the figure for 1936, while the total number of flights increased by 8 per cent. Although the number of flights by British aircraft was slightly lower than in 1936, the number of passengers carried therein increased by 8 per cent, and these passengers represented practically the same percentage as in 1936 of all passengers carried. Of the other specified nationalities, percentage increases of 34, 25, 51 and 13 were recorded in respect of flights by Dutch, French, German and Swiss aircraft, respectively, whilst Belgian aircraft showed no change. Of the passengers conveyed in the foreign-owned aircraft, the French showed the greatest increase with 24 per cent.

It should be noted that direct relation of the numbers of passengers carried to the numbers of aircraft flights, with a view to determining



the average numbers of passengers carried per flight, is subject to the reservation that the aircraft flights include certain services on which mails or goods only were carried.

**Tables 3 (A)–(F).**—These tables relate to the services operated by Imperial Airways Ltd.

In Table 3 (A), which covers the European services, except for mail ton-miles which increased by 62 per cent, and the average load which rose slightly to 0·9 ton from 0·8 ton, decreases are recorded, the percentages of such reductions being as follows:—Aircraft miles, 7; passenger miles, 2; freight ton-miles, 14; passenger ton-miles, 2.

Throughout Table 3 (B), which deals with the England–Egypt route, considerable increases are recorded, as shown by the following percentages:—Aircraft miles, 70; passenger miles, 136; mail ton-miles, 175; freight ton-miles, 96; passenger ton-miles, 136. The average load increased by about one-half, namely, from 1·5 tons to 2·2 tons. The effect of the introduction of the Empire Air Mail Scheme on the England–South Africa route at the end of June, 1937, is reflected in the figures for mail ton-miles.

General increases are shown in Table 3 (C), which relates to the Egypt–India–Singapore and Penang–Hong Kong services. Mail ton-miles and freight ton-miles in particular show large increases, namely, 27 and 31 per cent, respectively. It will be observed that the average load increased to the level of the previous highest figure, which was 1·0 ton in 1933.

On the African services (including the feeder services operated within the Empire Air Mail Scheme agreement), which are covered by Table 3 (D), there were increases generally, except for the ton-miles of freight, which decreased slightly by 3 per cent. This slight decline loses significance, however, in the light of the mail ton-mile increase of 149 per cent, which was due largely to the introduction of the Empire Air Mail Scheme on 29th June, 1937.

Table 3 (E) relates to the new service between Bermuda and New York, which commenced in June, 1937.

Table 3 (F), which summarises the operations of Imperial Airways Ltd. as detailed in Tables 3 (A)–(E), shows increases throughout, the most striking being passenger-miles, 27 per cent, and total ton-miles, 55 per cent.

**Table 4.**—This table relates primarily to the operation of companies other than Imperial Airways Ltd. on services in the United Kingdom, or between the United Kingdom and the Continent. Some companies have not rendered returns, and in some cases companies have not included in their returns services which were operated only for a short time, or on request. Conservative estimates have been included in respect of important services for which statistics



are not available. The figures show traffic increases in 1937, as compared with the previous year, as follows :—Aircraft miles, 6 per cent ; passengers carried, 2 per cent ; combined weight of mail and goods (including excess luggage), 31 per cent.

**Table 5.**—This table gives statistics relating to accidents in the course of regular air transport services. Approximately 10,000,000 passenger miles were flown in 1937 for each passenger killed, whilst 2,155,000 aircraft miles were flown per accident in which any occupants of the aircraft were killed. During the seven-year period 1931–37, the corresponding averages were 3,632,000 and 1,862,000, respectively.

**Table 6.**—The statistics of government-assisted light aeroplane clubs given in this table show that the numbers of clubs and members at the end of 1937 were 53 and 12,871 respectively, compared with 48 and 12,141 at the end of 1936. The number of members (744) who qualified for Class “A” pilots’ licences was lower by 15 per cent than the corresponding figure for the previous year, but the number of members holding such licences (3,418) at the end of the year was greater by 4 per cent than at the end of 1936. The numbers of flights and hours in dual or solo flying by club members were lower by 4 and 5 per cent, respectively, than the corresponding figures for 1936. These decreases may perhaps be attributed in part to the counter attraction to light aeroplane clubs which is now offered by the Royal Air Force Volunteer Reserve, and also to the expansion of the Royal Air Force.

**Table 7.**—This table records the regular air transport traffic at United Kingdom airports (*i.e.* aerodromes with customs facilities) during 1937. Certain additional information in respect of Croydon Airport is given in Table 8.

**Table 8.**—This table gives certain statistics in regard to Croydon Airport in addition to those given in Table 7. An increase is shown in all cases except for the number of local and test flights which show a slight decrease. Information is also given regarding the number of visitors conducted over the airport and the number admitted to the public enclosure.

**Table 9.**—This table shows the traffic dealt with by the Air Ministry aeronautical radio stations in the United Kingdom. It will be seen that, taking the traffic as a whole, there was a considerable increase in 1937 as compared with the previous year. Classes of traffic which show particularly large increase are :—Weather reports passed to aircraft (82 per cent), D/F reciprocal bearings passed to aircraft (66 per cent), traffic messages handled (83 per cent), and meteorological messages handled (48 per cent).



**Table 10.**—An analysis is given in this table of the letter mail carried by air outwards from the United Kingdom to destinations abroad by both British and foreign aircraft. Development of the policy of despatching first-class mail by air, at the ordinary international rates of postage, where useful acceleration is thereby secured, resulted in an increase of 94 per cent in the case of mail sent by the European services, while the introduction of the first stage of the Empire Air Mail Scheme was reflected in an increase of 104 per cent in the letter mail despatched by the Empire services. Figures are also given for letter mail carried by air within the United Kingdom, and show an increase of 28 per cent.



TABLE 1

## REGULAR AIR SERVICES

Regular services operated by United Kingdom companies, including internal services, services between the United Kingdom and the Continent, the Bermuda-New York service, and services operated by Imperial Airways Ltd. and associated companies on the Empire routes.

Period.	Aircraft stage flights.		Passengers carried (individuals). (ii)	Cargo carried (tons). (iii)		Mileage.		Ton-mileage. (iii)	
	No.	Average length (miles).		Mails.	Freight.	Aircraft.	Passenger.	Freight.	Mails.
1937	87,800	120	244,400	1,608	2,353	10,773,000	49,729,000	804,600	3,873,500
1936	81,300	120	236,300	977	2,147	9,584,000	41,144,000	656,800	1,895,400
1935	87,200	100	200,000	714	1,898	8,412,000	42,360,000	733,600	1,346,500
1934	51,600	90	135,100	250	1,172	4,557,000	29,162,000	455,300	664,600
1933	23,200	110	79,100	171	743	2,638,000	21,601,000	326,800	406,200
1932	9,100	200	48,200	139	633	1,793,000	16,007,000	252,700	277,200
1931	5,800	230	23,800	120	649	1,354,000	7,009,000	200,500	214,900
1930	5,800	210	24,000	116	716	1,222,000	6,003,000	196,200	180,000
1929	5,700	210	28,500	99	828	1,189,000	7,147,000	218,600	126,800
1928	4,800	190	27,300	83	730	916,000	6,477,000	178,600	36,900
<i>Yearly average—</i>									
1933-1937	66,200	110	179,000	744	1,663	7,193,000	36,799,000	595,000	1,637,000
1928-1932	6,200	210	30,400	111	711	1,295,000	8,529,000	208,000	167,000
1925-1927	4,100	190	15,500	615		791,000	3,562,000	153,000 (iv)	
1920-1924	3,400	200	10,100	248		693,000	(iv)		

NOTES.—(i) The above statistics are, to some extent, compiled from returns rendered voluntarily by various companies, and in some instances the returns rendered were incomplete. The statistics should, therefore, be regarded as approximate only.

(ii) For 1920-24, the figures represent stage-passengers. From 1925 onwards the records relate to individual passengers. Prior to 1936 a few non-paying passengers may be included.

(iii) Records for freight and mails separately are not available for the years 1925-1927. For 1934 and 1935, the records for freight include a certain amount of free luggage carried on certain services other than those operated by Imperial Airways Ltd.

(iv) Records not available.



TABLE 2  
COMMERCIAL CROSS-CHANNEL FLIGHTS  
Aircraft flights and passengers carried between Great Britain and the Continent (excluding Channel Islands)

Period.	Nationality of Aircraft.																Percentage of British to Total.		
	British.						Foreign.						Total British and Foreign.						
	Flights.		sengers carried.		Belgian.		Dutch.		French.		German.				Swiss.			Others.	
Flights.	sengers carried.	Flights.	sengers carried.	Flights.	sengers carried.	Flights.	sengers carried.	Flights.	sengers carried.	Flights.	sengers carried.	Flights.	sengers carried.	Flights.	sengers carried.	Flights.	sengers carried.	Flights.	sengers carried.
1937.																			
January ...	612	2,327	75	306	167	931	160	897	103	329	79	797	—	—	—	1,196	5,587	51	42
February ...	596	2,468	75	363	165	1,169	155	978	101	416	61	658	—	—	—	1,153	6,052	52	41
March ...	747	4,083	112	717	191	1,762	278	1,844	107	493	66	662	—	—	—	1,501	9,561	50	43
April ...	798	5,141	112	946	316	2,360	237	1,871	219	1,215	65	558	2	1	9	1,749	12,092	46	42
May ...	1,238	7,539	130	956	362	2,632	274	2,162	244	1,256	62	644	2	2	2	2,312	15,198	54	50
June ...	1,265	9,092	173	1,479	398	3,294	336	2,880	184	962	60	721	—	—	—	2,416	18,428	52	49
July ...	1,681	11,479	313	2,520	460	3,825	371	3,309	186	967	76	964	2	3	3	3,089	23,067	54	50
August ...	1,737	11,190	345	2,431	432	2,793	353	2,950	195	828	68	1,062	—	—	—	3,130	21,254	55	53
September	1,367	9,922	184	1,442	414	3,119	334	2,936	229	1,325	64	867	—	—	—	2,592	19,611	53	51
October ...	1,128	8,768	81	701	260	2,370	246	2,136	220	1,158	53	587	—	—	—	1,988	15,720	57	56
November	768	3,870	71	420	224	1,419	140	1,025	202	680	52	347	2	16	2	1,459	7,777	53	50
December	671	2,088	64	186	202	903	110	673	186	372	70	556	—	—	—	1,303	4,778	51	44
1937, Total	12,608	77,967	1,735	12,467	3,591	26,577	2,994	23,661	2,176	10,001	776	8,423	8	29	8	23,888	159,125	53	49
1936, Total	13,191	72,215	1,733	12,237	2,683	25,856	2,397	19,055	1,440	8,230	689	6,760	35	60	35	22,168	144,413	60	50
Yearly Average.																			
1933-37 ...	9,489	66,368	1,481	8,815	2,521	20,467	2,879	18,462	1,463	6,763	375	3,853	16	38	16	18,224	124,766	52	53
1928-32 ...	3,000	27,314	1,083	2,841	1,303	5,692	2,748	11,726	999	2,482	—	—	9	13	9	9,142	50,068	33	55
1923-27 ...	2,722	12,998	198	518	666	2,123	1,421	5,428	198	527	—	—	2	7	2	5,207	21,601	52	60



TABLE 3 (A)  
IMPERIAL AIRWAYS LTD.  
Traffic Statistics of European Services (excluding England-Egypt and London-Brindisi Services)  
(Total route mileage, 1937: 1,752)

Period.	Aircraft miles.	Passenger miles.	Ton-miles.				Average load (iii). Tons.
			Cargo (i).		Passengers.	Total.	
			Freight.	Mails.			
1937	1,396,700	12,297,000	114,000	21,100	1,098,000	1,233,100	0·9
1936	1,504,500	12,522,000	133,300	13,000	1,117,900	1,264,200	0·8
1935	1,256,700	12,836,000	147,100	11,300	1,146,000	1,304,400	1·0
1934 (ii)	760,300	10,375,000	134,300	7,800	926,300	1,068,400	1·4
1933	762,300	11,101,000	149,000	9,700	991,200	1,149,900	1·5
1932	656,700	9,611,000	128,300	12,400	858,100	998,800	1·5
1931	623,000	4,918,000	139,100	14,800	439,200	593,100	0·9
1930	676,900	5,103,000	157,000	18,300	455,700	631,000	0·9
1929	778,300	6,125,000	188,700	15,400	546,900	751,000	1·0
1928	793,400	6,023,000	170,100	14,200	537,700	722,000	0·9
1927	614,700	4,028,000	137,000		359,600	496,600	0·8
1926	733,000	3,746,000	159,000		334,500	493,500	0·7
1925	805,300	2,645,000	147,600		236,200	383,800	0·5
1924 (9 months)	699,900	2,482,000	129,100		221,600	350,700	0·5

NOTES.—(i) From April, 1924, to December, 1927, records for freight and mail ton-miles separately are not available.

(ii) Although the same services were operated in 1934 as in 1933, more direct courses were followed between stopping places, thus reducing the route mileages on which the statistics are based.

(iii) The reduction since 1934 in respect of the average load carried, is due to the employment of smaller aircraft on the London-Budapest service. This service was discontinued in October, 1937.



TABLE 3 (B)

## IMPERIAL AIRWAYS LTD.

## Traffic Statistics of England - Egypt Service (including London-Brindisi Service)

(Total route mileage, 1937 : 2,394)

	Period.	Aircraft miles.	Passenger miles.	Ton-miles.				Average load. Tons.
				Cargo.		Passengers.	Total.	
				Freight.	Mails.			
1937 (i)	...	1,056,500	9,350,000	200,700	1,241,200(ii)	920,200	2,362,100	2.2
1936 (i)	...	621,800	3,960,000	102,200	451,400	389,800	943,400	1.5(iii)
1935 (i)	...	569,900	4,900,000	121,500	340,800	482,300	944,600	1.7 (iii)
1934	...	220,800	3,235,000	76,900	188,900	318,400	584,200	2.7
1933	...	211,600	2,644,000	58,400	119,500	260,900	438,800	2.1
1932	...	224,400	2,136,000	52,200	90,700	210,700	353,600	1.6
1931	...	170,800	857,000	29,100	81,900	84,500	195,500	1.1
1930	...	168,000	398,000	20,200	67,600	39,300	127,100	0.7
1929, April-December (iv)	...	155,900	362,000	13,000	46,100	35,700	94,800	0.6

Notes.—(i) London-Brindisi service operated from May, 1935, to January, 1937.

(ii) The large increase of mails was mainly due to the introduction of the Empire Air Mail Scheme on the England-South Africa route on 29th June, 1937.

(iii) The reduction in 1935 and 1936 in respect of the average load carried, was due to the employment of smaller aircraft on the London-Brindisi service.

(iv) England-Egypt service commenced in April, 1929.



TABLE 3 (C)

## IMPERIAL AIRWAYS LTD.

## Traffic Statistics of Egypt-India - Singapore Service (including Penang - Hong-Kong Service)

(Total route mileage, 1937 : 7,646)

	Period.	Aircraft miles.	Passenger miles.	Ton-miles.				Average load. Tons.
				Cargo.		Passengers	Total.	
				Freight.	Mails.			
1937	...	1,540,800	5,451,000	100,400	978,500	536,500	1,615,400	1.0
1936 (i)	...	1,458,000	4,768,000	76,400	770,100	469,300	1,315,800	0.9
1935	...	1,149,800	4,408,000	95,000	557,100	433,900	1,086,000	0.9
1934	...	671,300	2,912,000	63,400	274,900	286,600	624,900	0.9
1933 (ii)	...	362,100	1,560,000	40,900	153,600	153,900	348,400	1.0
1932	...	267,400	1,267,000	24,900	99,200	125,000	249,100	0.9
1931	...	259,300	529,000	21,500	102,400	52,200	176,100	0.7
1930	...	260,000	502,000	19,000	94,100	50,500	163,600	0.7
1929 (iii)	...	231,800	660,000	16,900	65,300	66,300	148,500	0.7
1928	...	117,900	454,000	8,500	22,700	45,600	76,700	0.7
27th December, 1926 to 31st December, 1927	...	104,300	268,000	2,300	13,800	26,900	43,100	0.4

NOTES.—(i) Service extended from Penang to Hong-Kong in March, 1936.

(ii) Service between Karachi and Singapore operated in conjunction with Indian Trans-Continental Airways Ltd., from July, 1933.

(iii) The service was extended from Basra to Karachi in April, 1929.



TABLE 3 (D)  
**IMPERIAL AIRWAYS LTD.**  
**Traffic Statistics of Egypt-South Africa Service (including West Africa Service)**  
*(Total route mileage, 1937 : 9,870)*

Period.	Aircraft miles.	Passenger miles.	Ton-miles.				Average load. Tons.
			Cargo.		Passengers.	Total.	
			Freight.	Mails.			
1937 (i) (ii) ...	1,648,200	7,943,000	124,500	1,395,700(iii)	781,800	2,302,000	1.4
1936 (iv) (v) ...	1,204,700	6,672,000	128,700	559,700	656,700	1,345,100	1.1
1935 ...	1,103,000	8,681,000	192,400	390,400	854,400	1,437,200	1.3
1934 ...	658,900	5,889,000	103,900	191,400	579,600	874,900	1.3
1933 ...	590,200	4,923,000	77,900	123,400	485,700	687,000	1.2
1932 (vi) ...	585,200	2,940,000	47,300	74,900	290,100	412,300	0.7
1931, March-December (vii) ...	223,800	705,000	10,800	15,800	69,500	96,100	0.4

Notes.—(i) As from 2nd June, 1937, in preparation for the Empire Air Mail Scheme to commence at the end of that month, the main African service was diverted at Kisumu to the coast, proceeding via Mombasa, Dar-es-Salaam and Beira to the new terminus, Durban.

(ii) Totals include the operations of feeder services within the Empire Air Mail Scheme.

(iii) The large increase of mails was mainly due to the introduction of the Empire Air Mail Scheme on the England-South Africa [route on 29th June, 1937.

(iv) Service extended from Khartoum to Nigeria in February, 1936.

(v) Service south of Johannesburg operated by South African Airways from 1st April, 1936.

(vi) Service extended from Kisumu to Cape Town in January, 1932.

(vii) Service as far as Kisumu commenced in March, 1931.

TABLE 3 (E)  
**IMPERIAL AIRWAYS LTD.**  
**Traffic Statistics of Bermuda-New York Service**  
*(Total route mileage, 1937 : 770)*

Period.	Aircraft miles.	Passenger miles.	Ton-miles.				Average load. Tons.
			Cargo.		Passengers	Total.	
			Freight.	Mails.			
1937, 16th June to 31st December...	58,600	355,000	700	300	34,900	35,900	0.6



TABLE 3 (F)

## IMPERIAL AIRWAYS LTD.

## Total Traffic Statistics : All Regular Services

(including special charter flights over regularly operated routes)

Period.	Route mileage.	Aircraft miles flown.	Passengers carried (individual).	Passenger miles flown.	Ton-miles.			Average load. Tons.
					Freight.	Mails.	Passengers.	
1937	22,432	5,700,800	64,629	35,396,000	540,300	3,636,800	3,371,400	1·3
1936	19,351	4,789,000	60,374	27,921,000	440,600	1,794,200	2,633,800	1·0
1935	15,529	4,079,400	66,324	30,825,000	556,000	1,299,600	2,916,600	1·2
1934	13,471	2,315,100	54,875	22,411,000	378,500	663,000	2,110,900	1·4
1933	13,709	1,926,000	54,768	20,228,000	326,200	406,200	1,891,700	1·4
1932	11,263	1,733,700	45,844	15,954,000	252,700	277,200	1,483,900	1·2
1931	7,760	1,276,900	23,817	7,009,000	200,500	214,900	645,400	0·8
1930	5,570	1,104,900	24,027	6,003,000	196,200	180,000	545,500	0·8
1929	5,305	1,166,000	28,484	7,147,000	218,600	126,800	648,900	0·9
1928	2,215	911,300	27,303	6,477,000	178,600	36,900	583,300	0·9
1927	2,355	719,000	19,005	4,296,000	153,100		386,500	0·7
1926	1,368	733,000	16,621	3,746,000	159,000		334,500	0·7
1925	1,368	805,300	11,027	2,645,000	147,600		236,200	0·5
1924	1,520	699,900	10,321	2,482,000	129,100		221,600	0·5

Note.—For details of changes and extensions in routes, see footnotes to Tables 3 (A)–(E).



TABLE 4

**REGULAR AIR SERVICES, INTERNAL AND CONTINENTAL, OPERATED BY UNITED KINGDOM COMPANIES  
OTHER THAN IMPERIAL AIRWAYS LTD.**

Company.	Services.	Route mileage.	Aircraft miles flown (approx.).	Passengers carried.	Cargo (tons).	
					Mail and Goods (includ- ing excess luggage) (approx.).	
Air Dispatch, Ltd. ...	London (Croydon)-Paris ...	205	135,500	45	215.5	
	London (Croydon)-Le Touquet ...	100	16,500	359	—	
Allied Airways (Gandar Dower), Ltd.	Aberdeen (Dyce)-Thurso-Kirkwall (Howe)- Lerwick (Sumburgh).	230	57,000	362	7.6	
	Thurso-St. Margaret's Hope-Kirkwall (Howe)	28	14,000	1,374	—	
	Thurso-St. Margaret's Hope-South Ronald- shay-Kirkwall (Howe).	42	4,500	168	0.6	
	Thurso-Kirkwall (Stromness)-Lerwick (Sum- burgh).	120	500	4	—	
	Kirkwall (Howe)-Thurso-Inverness ...	128	5,500	22	—	
	Newcastle-Stavanger ...	390	*	*	*	
Blackpool and West Coast Air Services, Ltd.	Manchester (Barton)-Liverpool (Speke)- Blackpool (Stanley Park)-Isle of Man (Ronaldsway)-Belfast (Newtownards).	192	}			
	London (Croydon)-Bristol-Dublin ...	325		*	*	
	Liverpool (Speke)-Isle of Man (Ronaldsway)- Dublin.	183				
	London (Gatwick/Croydon)-Paris ...	205	549,500	14,316	152.8	
British Airways, Ltd. ...	London (Gatwick)-Lille ...	150	6,500	34	0.2	
	London (Gatwick/Croydon) - Amsterdam - Hamburg-Copenhagen-Malmö-Stockholm.	1,000	493,500	2,386	107.9	
	London (Croydon)-Cologne-Hanover-Berlin...	621	183,500	—	312.4	



Channel Air Ferries, Ltd.	Brighton (Shoreham)—Bembridge—Bournemouth.	68	19,000	1,094	—
	Brighton (Shoreham)—Bembridge	38	2,000	95	—
	Brighton (Shoreham)—Deauville	106	6,000	117	0.4
	Land's End (St. Just)—Silly Isles	33	5,440	574	0.2
Highland Airways, Ltd.	Inverness—Wick—Kirkwall (Wideford)	115	84,500	3,004	91.6
	Aberdeen (Kintore)—Inverness—Wick—Kirkwall (Wideford).	185	9,000	184	0.9
	Aberdeen (Kintore)—Inverness—Wick—Kirkwall (Wideford)—Lerwick (Sumburgh).	270	41,000	882	3.7
	Kirkwall (Wideford)—Lerwick (Sumburgh).	86	21,000	430	0.1
	Kirkwall (Wideford)—Wick—Outer Orkney Isles.	Variable	31,000	2,409	0.5
International Air Freight, Ltd.	London (Croydon)—Amsterdam	223	*	*	*
Isle of Man Air Services, Ltd.	Manchester (Barton)—Liverpool (Speke)—Blackpool (Stanley Park)—Isle of Man (Ronaldsway)—Belfast ( Newtownards).	180	66,000	2,188	55.2
Jersey Airways, Ltd.	Jersey—London (Heston)	190	218,500	8,866	31.6
	Jersey—Southampton (Eastleigh)	130	402,500	21,936	428.7
	Jersey—Alderney	40	10,500	857	1.7
	Jersey—Exeter	120	25,000	518	1.0
	Jersey—Brighton (Shoreham)	144	37,500	1,091	2.9
	Southampton—Alderney	90	Included in other services shown above.	46	0.4
Lundy and Atlantic Coasts Air Lines, Ltd.	Barnstaple—Lundy Island	24	*	*	*
North Eastern Airways, Ltd.	London (Croydon)—Doncaster—Leeds (Yeadon)—Newcastle—Perth—Aberdeen (Dyce).	455	198,000	619	2.2
	Grimsby—Hull	18	19,500	1,124	—
	Doncaster—Manchester (Barton)—Liverpool (Speke).	76	31,000	61	—
	Doncaster—Hull	40	21,000	85	—
	London (Croydon)—Le Zoute	145	5,500	61	0.1

\* Records not available.



TABLE 4—continued.

**REGULAR AIR SERVICES, INTERNAL AND CONTINENTAL, OPERATED BY UNITED KINGDOM COMPANIES  
OTHER THAN IMPERIAL AIRWAYS LTD.**

Company.	Services.	Route mileage.	Aircraft miles flown (approx.).	Passengers carried.	Cargo (tons).	
					Mail and Goods (includ- ing excess luggage) (approx.).	
Northern Airways, Ltd.	Glasgow (Renfrew)—Skye—North Uist—South Uist—Barra—Glasgow (Renfrew).	360	109,500	1,385	8·8	
	Glasgow (Renfrew)—Campbeltown—Islay ...	90	106,000	5,258	16·6	
	Glasgow (Renfrew)—Belfast (Newtownards)—Isle of Man (Ramsey)—Blackpool (Stanley Park)—Liverpool (Speke).	281	181,500	2,718	19·4	
	Glasgow (Renfrew)—Isle of Man (Ramsey) ...	107				
	Isle of Man (Ramsey)—Carlisle ...	72	165,500	33,015	9·8	
	Portsmouth—Ryde—Bournemouth ...	43				
	Southampton—Ryde ...	20				
	London (Croydon)—Birmingham—Stoke—Liverpool (Speke)—Isle of Man (Ronaldsway)—Belfast (Newtownards)—Glasgow (Renfrew).	457	410,500	5,049	221·3	
	Leeds (Yeadon)—Manchester (Barton)—Liverpool (Speke)—Blackpool (Stanley Park)—Isle of Man (Ronaldsway).	161	290,500	9,238	7·8	
	Glasgow (Renfrew)—Isle of Man (Ronaldsway)—Belfast (Newtownards)—Isle of Man (Ronaldsway).	123	64,500	1,831	0·1	
Portsmouth, Southsea & Isle of Wight Aviation, Ltd.	Carlisle—Isle of Man (Ronaldsway) ...	55	23,500	1,605	3·7	
	Bristol—Cardiff—Exeter—Plymouth ...	89	28,500	1,234	0·1	
		115	30,500	809	0·3	
Railway Air Services, Ltd.						



Western Airways, Ltd.	Liverpool (Speke) - Birmingham - Gloucester-Bristol - Southampton (Eastleigh) - Ryde-Brighton (Shoreham).	277	112,500	5,666	0.8
	Ryde-Brighton - Southampton (Eastleigh) - Cardiff - Bristol (Shoreham).	143	3,000	13,601	—
Wrightways, Ltd. Conservative estimate for companies for which detailed records are not available.	Weston-super-Mare-Cardiff ...	12	59,000	162	—
	Weston-super-Mare-Birmingham ...	95	9,500	360	383.1
	London (Croydon)-Paris ...	205	314,000	32,525	385.0
All United Kingdom companies (excluding Imperial Airways Ltd.), including services operated by associated companies on the Empire air routes.	1937	—	5,072,000	179,767	2,475.0
	1936	—	4,795,000	175,926	1,885.9
Total for all companies noted above.	1937	—	5,701,000	64,629	1,485.8
	1936	—	4,789,000	60,374	1,238.0
Foreign Company—K.L.M.	1937	—	10,773,000	244,396	3,960.8
	1936	—	9,584,000	236,300	3,123.9
Liverpool-Doncaster (-Amsterdam)†	1937	74	12,000	191	0.9
	1936	74	6,000	122	1.7

† Statistics include those for traffic in transit between Liverpool and Amsterdam or *vice versa* as well as those for traffic between Liverpool and Doncaster only.



TABLE 5

## ACCIDENTS

(Regular Air Services Operated by United Kingdom Companies at Home and Abroad)

Year.	Aircraft flights.	Aircraft mileage.	Passenger mileage.	Passengers carried (individuals).	Fatal accidents.*	Passengers.		Crew.	
						Killed.	Seriously Injured.	Killed.	Seriously Injured.
1937 ...	87,800	10,773,000	49,729,000	244,400	5	5	5	10	1
1936 ...	81,300	9,584,000	41,144,000	236,300	8	11	1	16	5
1935 ...	87,200	8,412,000	42,360,000	200,000	4	12	—	6	—
1934 ...	51,600	4,557,000	29,162,000	135,100	2	9	—	2	—
1933 ...	23,200	2,638,000	21,601,000	79,100	2	20	—	5	—
1932 ...	9,100	1,793,000	16,007,000	48,200	—	—	—	—	—
1931 ...	5,800	1,354,000	7,009,000	23,800	—	—	—	—	—
1930 ...	5,800	1,222,000	6,003,000	24,000	1	3	1	1	1
1929 ...	5,700	1,189,000	7,147,000	28,500	3	12	1	5	3
1928 ...	4,800	916,000	6,477,000	27,300	—	—	—	—	—
1927 ...	4,200	789,000	4,296,000	19,000	—	—	—	—	—
1926 ...	4,100	778,000	3,746,000	16,600	—	—	—	—	—
1925 ...	4,000	806,000	2,645,000	11,000	—	—	—	—	—

\* Accidents in which one or more occupants (crew or passengers) were killed. In addition, in 1936, there was one accident in which the two occupants (crew) were seriously injured; these casualties are included above. No accidents of this nature occurred during 1925–1937.



	1919-1924	1925-1930 (six years).	1931-1937 (seven years).
Aircraft flights per accident resulting in death of occupants	...	7,200	16,500
Aircraft flights per accident resulting in death of, or serious injury to occupants	...	7,200	15,700
Aircraft mileage per accident resulting in death of occupants	...	1,425,000	1,862,000
Aircraft mileage per accident resulting in death of, or serious injury to occupants	...	1,425,000	1,778,000
Passengers carried per passenger killed	...	8,400	17,000
Passengers carried per passenger killed or seriously injured	...	7,400	15,300
Passenger mileage per passenger killed	...	2,021,000	3,632,000
Passenger mileage per passenger killed or seriously injured	...	1,783,000	3,286,000

† Statistics on a strictly comparable basis for the period August, 1919-December, 1924, are not available. During this period, there were five fatal and two serious injury accidents in regular air transport, and one fatal and two serious injury accidents in non-regular air transport. The approximate aircraft mileage flown in all air transport, including air taxi services, which are excluded from the 1925-1937 records, was 3,600,000 miles: the number of stage-passengers was 52,000. Thirteen passengers were killed, and three seriously injured in regular air transport accidents; no passengers were killed, but two passengers were seriously injured in non-regular air transport accidents: the corresponding figures for crew were eight and one, and one and four respectively.

NOTE.—More detailed statistics and other particulars of the accidents (both major and minor) which occurred in 1937, are given on pages 63-67.







Leicestershire ...	124	119	431	550	8	63	—	3	2,317	883	2,523	932
Liverpool and District ...	179	178	230	408	16	104	—	—	4,417	2,150	5,389	2,335
London ...	404	415	81	496	52	290	1	29	7,258	4,329	7,764	4,459
London Air Park ...	121	133	—	133	30	88	1	4	4,205	2,164	4,361	2,233
London Transport (Central Omnibus Sports Association).	1,181	1,185	1	1,186	7	39	—	—	1,909	726	2,198	793
Malling ...	74	83	30	113	21	53	—	5	2,335	1,079	2,849	1,161
Midland ...	158	164	174	338	17	98	—	—	2,663	1,184	3,277	1,329
Newcastle-upon-Tyne ...	162	123	212	335	16	83	—	3	3,180	1,636	4,744	1,934
Norfolk and Norwich ...	67	83	189	272	30	39	—	—	3,601	1,442	3,975	1,517
Northamptonshire ...	37	42	217	259	12	25	—	—	953	498	1,099	562
North British (vii) ...	6	—	—	—	2	25	—	—	454	108	584	127
North Staffordshire ...	84	87	96	183	3	48	—	4	668	313	773	338
North of Ireland ...	44	57	40	97	5	22	—	—	793	350	989	383
Old Etonians (v) ...	63	—	—	—	—	—	—	—	61	37	69	37
Plymouth (i) ...	40	52	28	80	5	24	—	1	661	284	734	291
Portsmouth ...	133	124	123	247	12	89	1	11	2,084	1,143	2,478	1,211
Reading (iii) ...	13	58	42	100	1	39	—	7	129	64	209	74
Redhill ...	232	237	—	237	21	117	3	17	3,762	2,540	3,865	2,577
Scottish ...	202	183	298	481	20	110	—	4	3,996	1,879	5,610	2,051
Sheffield ...	44	49	53	102	7	22	—	—	944	455	1,008	468
South Coast ...	119	148	187	335	15	73	2	11	2,642	1,302	2,982	1,350
Southend ...	108	117	385	502	9	67	—	—	2,570	1,021	3,519	1,196
South Staffordshire (i) ...	26	35	76	111	4	18	—	—	637	272	686	289
Strathgair (i) ...	42	62	44	106	10	20	—	17	780	358	938	386
Thanet ...	51	62	54	116	13	33	—	—	1,161	573	1,464	664
Tollerton ...	115	116	245	361	3	67	—	3	1,905	937	2,128	999
University ...	33	33	—	361	3	67	—	—	1,441	871	1,489	880
Wiltshire ...	96	95	10	105	13	72	—	—	1,151	608	1,274	668
Witney and Oxford ...	57	54	17	71	5	23	1	1	1,344	688	1,482	710
Worcestershire (iv) ...	6	67	46	113	—	22	—	—	9	4	15	4
Yapton ...	212	255	270	525	47	136	2	8	3,239	1,566	3,301	1,591
Yorkshire ...	185	197	110	307	13	97	—	1	2,251	1,171	4,092	1,958
York County Aviation (vi) ...	59	—	—	—	7	—	—	—	751	404	920	430
York and Leeming ...	138	169	113	282	15	77	—	2	2,615	1,547	3,502	1,927
All Clubs : 1937 (53) ...	6,948	7,157	5,714	12,871	744	3,418	32	240	112,698	56,455	135,608	61,836

[Continued overleaf.]



TABLE 6—continued.

## GOVERNMENT-ASSISTED LIGHT AEROPLANE CLUBS

Name of Club.  (The number of clubs on 31st December in each year is shown in brackets at the foot of this column.)	Membership.			Members qualified as pilots.			Aircraft flights and hours flown during the year by club aircraft.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	Flying Members.		Associates on 31st Dec-ember.	Class " A " licence.		Class " B " licence.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Average during year. (viii)	On 31st Dec-ember.		Total on 31st Dec-ember.	Number who qualified during year.	Member-ship on 31st Dec-ember.	Number who qualified during year.	Member-ship on 31st Dec-ember.	Flying, dual or solo, by club members.	All flying by club aircraft.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

NOTES.—(i) Government-assisted from April, 1937.

(ii) " " June, 1937.

(iii) " " " October, 1937.

(iv) Government-assisted from November, 1937.

(v) Ceased to receive government assistance April, 1937.

(vi) Ceased to receive government assistance September, 1937.

(vii) Closed during winter months.

(viii) The average memberships quoted for clubs referred to in notes (i)–(vi), represent the average memberships for the full year corresponding to the actual average memberships for the shorter period during which the clubs were government-assisted. For example, a club with an average membership of 500 during a government-assisted period of six months has been treated as having an average membership of 250 over the full year.

(ix) In 1932, various clubs affiliated to National Flying Services Ltd., ceased to receive government assistance.



TABLE 7

## REGULAR AIR TRANSPORT AT AIRPORTS DURING 1937

No regular services were operated during 1937 at the following airports :—

Land airports—Gravesend, Leicester (i), Ramsgate. Water airports—Harwich, Liverpool (Mersey).

Aerodrome.	Aircraft.		Passengers (ii).		Weight of mail (ii) (including printed matter and parcels).		Weight of goods and excess luggage (ii).	
	Arrivals.	Departures	Arrivals.	Departures	Arrivals.	Departures	Arrivals.	Departures.
					(Tons)	(Tons)	(Tons)	(Tons)
Blackpool (Stanley Park)	2,024	2,024	2,243	1,937	0.9	—	1.6	1.7
Brighton (Shoreham)	712	717	3,066	3,242	—	—	1.0	1.4
Bristol (Whitchurch)	898	901	1,016	1,070	—	—	0.6	0.9
Cardiff (Pangam Moors)	2,733	2,744	7,865	7,605	—	—	—	—
Carlisle (iii)	166	166	606	628	—	—	—	—
Doncaster	1,131	1,135	549	526	0.1	—	0.3	0.4
Exeter (iii) (vi)	211	211	343	303	—	—	—	—
Glasgow (Renfrew)	2,302	2,309	5,805	5,367	30.4	40.0	10.2	30.5
Hull (Hedon) (iii)	850	850	630	544	—	—	—	—
Isle of Man (Ronaldsway)	3,514	3,527	10,234	11,337	87.5	64.5	58.5	2.9
Liverpool (Speke)	4,465	4,465	6,969	6,539	104.6	144.4	4.7	68.4
London (Croydon)	11,717	11,790	79,579	76,277	463.3	484.5	1,051.8(iv)	1,670.8(iv)
" (Gatwick) (iii)	113	120	228	229	1.0	11.6	1.9	4.1
" (Heston)	697	692	4,916	4,428	—	—	57.6(ix)	51.7(ix)
Lympe (iii) (x)...	—	52	—	—	—	—	—	40.4
Manchester (Barton)	1,831	1,832	2,318	2,284	—	—	1.4	14.6
Newcastle (vii)	150	149	58	53	—	—	—	—
Newtownards (Ards)	2,019	2,019	3,641	3,223	124.9	34.9	22.6	11.7
Plymouth (Roborough) (iii)	111	111	126	115	—	—	—	0.1
Portsmouth (iii)...	6,697	6,697	15,423	17,504	—	—	—	10.8
Southampton (Eastleigh)	2,542	2,556	13,404	11,618	36.9	22.7	—	309.1
Southampton Water (viii)	219	225	1,684	1,580	190.1	267.6	14.8	46.4

NOTES.—(i) Customs facilities available as from October, 1937.

(ii) The figures shown for passengers, mail and goods, relate only to transport commencing or terminating at the airport stated, and do not include transit traffic.

(iv) Based on the assumption that each passenger had 30 lb. of free luggage.

(v) Customs facilities available as from March, 1937.

(vii) Customs facilities available as from August, 1937.

(viii) This water airport was licensed as from March, 1937, and includes the area previously licensed as Southampton (Woolston).

(ix) Includes free luggage: no records available of paying load only.

(x) One-way regular service for newspapers operated during period July-September, 1937.

(vi) Customs facilities available as from May, 1937.



TABLE 8

**TRAFFIC, ETC., AT THE LONDON (CROYDON) AIRPORT**

(See also Table 7)

**Arrivals and departures of aircraft :—**

	1936		1937	
	A*	D*	A*	D*
Cross-Channel flights .. ..	9,025	9,102	11,381	11,443
Inland flights .. ..	5,994	5,977	6,993	6,983
Local and test flights .. ..	8,903	8,903	8,524	8,524
Totals .. ..	23,922	23,982	26,898	26,950

\* A = Arrivals. D = Departures.

**Passengers and cargo carried to and from Croydon on the regular services :—**

	1936	1937
<i>Continental Services :—</i>		
Total number of passengers (in and out) .. ..	129,824	150,941
Total weight of freight, mails and all baggage (in and out) in tons.	5,071	5,521
<i>Internal Services :—</i>		
Total number of passengers (in and out) .. ..	2,029	4,915
Total weight of freight, mails and all baggage (in and out) in tons.	*	196
<i>All Regular Services :—</i>		
Total number of passengers (in and out) .. ..	131,853	155,856
Total weight of freight, mails and all baggage (in and out) in tons.	*	5,717

\* Not available for 1936.

**Visitors.**—During 1937, 104,149 visitors (a decrease of approximately 2·7 per cent. on the 1936 total) were conducted over the airport by the official guides, while the number admitted to the public enclosure was 79,332 (an increase of approximately 18·4 per cent). These figures do not include guests visiting the airport by official invitation, nor members of the public admitted free to the enclosure on special occasions.



TABLE 9

# **AIR MINISTRY RADIO STATIONS IN THE UNITED KINGDOM :** **TRAFFIC STATISTICS**

	Bristol		Croydon		Doncaster (i)		Gatwick (ii)		Heston		Hull	
	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937
Aircraft worked ..	1,495	3,330	25,216	28,859	365	1,995	324	207	6,278	6,880	480	1,629
Aircraft intercepted (iii) ..	—	1,025	—	31	—	59	—	3,197	—	1,261	—	7,652
Weather reports passed to aircraft.	241	348	11,743	21,502	79	859	72	50	1,261	1,377	253	220
D/F bearings :—												
(a) passed to aircraft ..	827	1,509	13,993	11,524	81	1,392	39	207	1,784	2,809	421	449
(b) passed to Control for check purposes. (iii)	—	122	—	105	—	0	—	41	—	50	—	95
D/F reciprocals passed to aircraft.	289	398	12,636	19,707	181	1,083	1,181	1,253	1,220	1,410	31	93
D/F positions passed to aircraft.	0	1	757	1,343	0	0	0	0	88	131	9	10
Positions received from aircraft.	1,236	2,525	42,203	41,198	36	261	85	49	7,224	9,816	381	2,234
Aircraft control and miscellaneous messages sent and received.	2,033	6,206	66,241	94,232	7,002	11,209	514	739	10,202	44,714	427	5,253
Traffic messages handled ..	1,885	7,569	118,862	128,594	1,473	9,587	712	0	27,138	49,101	216	4,599
Meteorological messages handled.	2,759	9,866	103,577	105,978	1,984	6,555	30	0	29,755	40,105	701	1,907

[Continued overleaf.]

NOTES.—(i) Commenced operation in July, 1936.

(ii) Commenced operation of night watch in July, 1936.  
Commenced operation of day and night watch in November, 1936.(iii) Not recorded prior to 1937.  
Closed down on 19th June, 1937.



TABLE 9—continued.  
**AIR MINISTRY RADIO STATIONS IN THE UNITED KINGDOM:**  
**TRAFFIC STATISTICS—continued.**

	Inverness (iv)		Kirkwall (v)		Lympe		Manchester		Newcastle (vi)		Newtownards	
	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937
Aircraft worked ..	—	90	1,978	2,603	3,148	2,919	12,109	9,922	42	750	5,954	4,802
Aircraft intercepted (iii) ..	—	102	—	86	—	20,905	—	380	—	6	—	3,615
Weather reports passed to aircraft.	—	26	573	594	455	371	1,923	1,925	15	853	800	853
D/F bearings :—												
(a) passed to aircraft ..	—	20	434	397	3,645	2,444	5,892	3,420	9	969	1,364	1,775
(b) passed to Control for check purposes. (iii)	—	0	—	36	—	1,563	—	46	—	2	—	41
D/F reciprocals passed to aircraft.	—	57	365	224	278	321	279	365	39	617	547	870
D/F positions passed to aircraft.	—	0	1	0	0	0	82	53	—	0	37	1
Positions received from aircraft.	—	95	7,290	8,907	697	700	39,104	15,124	35	1,159	11,726	8,654
Aircraft control and miscellaneous messages sent and received.	—	178	2,961	12,325	967	1,472	1,057	17,821	136	2,370	16,479	19,394
Traffic messages handled ..	—	136	661	1,591	5,664	4,562	33,972	70,884	365	13,607	10,892	17,721
Meteorological messages handled.	—	46	591	924	3,520	3,520	25,728	39,874	115	3,788	3,537	4,899

Notes.—(iii) Not recorded prior to 1937.

(iv) Commenced operation in December, 1937.

(v) Commenced operation in May, 1936.

(vi) Commenced operation in October, 1936.



	Perth (vii)		Portsmouth		Pulham		Renfrew		Ronaldsway (viii)	
	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937
Aircraft worked .. ..	37	544	6,033	7,558	1,062	1,478	5,327	5,126	—	4,409
Aircraft intercepted (iii) .. ..	—	4,201	—	36	—	24,936	—	4,256	—	2,520
Weather reports passed to aircraft	15	444	832	1,391	0	2	1,386	1,348	—	1,054
D/F bearings:—										
(a) passed to aircraft .. ..	21	290	2,315	2,464	3,407	2,013	1,113	1,502	—	1,953
(b) passed to Control for check purposes. (iii)	—	3	—	73	—	3,680	—	13	—	0
D/F reciprocals passed to aircraft ..	39	538	104	171	3	0	1,010	1,494	—	731
D/F positions passed to aircraft ..	—	1	18	22	0	0	4	4	—	1
Positions received from aircraft ..	35	1,009	9,685	11,097	55	51	17,674	17,005	—	4,955
Aircraft control and miscellaneous messages sent and received.	21	3,209	6,347	13,502	0	18	1,634	5,636	—	16,350
Traffic messages handled .. ..	124	2,025	1,301	29,284	7	5	7,696	11,544	—	12,709
Meteorological messages handled ..	52	1,124	1,762	16,131	0	1	2,701	4,324	—	3,880

[Continued overleaf.]

NOTES.—(iii) Not recorded prior to 1937.

(vii) Commenced operation in August, 1936.

(viii) Commenced operation in July, 1937.



TABLE 9—*continued*.  
**AIR MINISTRY RADIO STATIONS IN THE UNITED KINGDOM:**  
**TRAFFIC STATISTICS—*continued*.**

	Sollas (ix)		Southampton (x)		Sumburgh (xi)		Yeadon (xii)		Totals for all stations	
	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937
Aircraft worked . . . . .	—	845	710	2,056	391	589	27	406	70,976	86,997
Aircraft intercepted (iii) . . . .	—	591	—	15	—	1,021	—	1,221	—	77,116
Weather reports passed to aircraft	—	2,383	111	279	69	118	7	20	19,835	36,017
D/F bearings :—										
(a) passed to aircraft . . . . .	—	286	589	99	186	294	0	328	36,120	36,144
(b) passed to Control for check purposes. (iii)	—	0	—	0	—	0	—	0	—	5,870
D/F reciprocals passed to aircraft . .	—	178	214	1,042	120	133	54	183	18,590	30,868
D/F positions passed to aircraft . .	—	0	0	0	2	0	0	0	998	1,567
Positions received from aircraft . .	—	2,383	160	992	588	777	2	154	138,216	129,145
Aircraft control and miscellaneous messages sent and received.	—	2,135	406	8,815	541	762	57	491	117,025	266,831
Traffic messages handled . . . . .	—	1,328	735	21,012	701	1,212	327	2,692	212,731	389,762
Meteorological messages handled . .	—	954	1,134	16,670	281	520	469	2,958	178,696	264,024

NOTES.—(iii) Not recorded prior to 1937.

(ix) Commenced operation in January, 1937.

(x) Commenced operation in May, 1936.

(xi) Commenced operation in June, 1936.

(xii) Commenced operation in October, 1936.



TABLE 10

## ANALYSIS OF MAIL CARRIED BY AIR

	1936. Tons.	1937. Tons.	Increase or decrease. Per cent.
(1) <i>From the United Kingdom to destinations abroad (British and foreign services) :—</i>			
(a) Letter mail :—			
European services .. ..	180	350*	+ 94
Empire services .. ..	147	301†	+ 104
Other extra-European services	14	16	+ 14
Total letter mail ..	341	667	+ 95
(b) Parcel mail (all services) ..	86	75	— 13
(2) <i>Within the United Kingdom (letter mail only).</i>	390	500	+ 28

\* The large increase in load was due to the development of the policy initiated in 1936 of despatching first class mail by air, at the ordinary international rates of postage, where useful acceleration is thereby secured.

† The large increase in load was mainly due to the introduction of the Empire Air Mail Scheme on the route to South Africa in June, 1937.

## SECTION II

## LICENCES AND CERTIFICATES

## Notes on the Tables

**Table 1.**—This table shows the number of licences and certificates issued during each of the years 1935–37, together with the number current at the end of the year in each case. The following notes give certain information of interest in connection with the statistics, additional to that contained in the notes at the foot of the table.

*Pilots' Licences.*—The small increase in the numbers of new issues and renewals of Class "A" licences in 1937 as compared with the previous year's figures was probably due to the entry into the Royal Air Force and its Reserves of large numbers of young men who could normally have been expected to take up or remain in private civil flying. The totals for 1936 and 1937 include substantial numbers of special short-period licences issued to pupil pilots undergoing training for entry into the Royal Air Force (*see Note (ii)*), but it should be noted that a fair proportion of these pilots renew their licences for private flying.



On 31st December, 1937, there was a total of 364 pilots authorised by endorsement on the licences to give instruction in flying. This figure comprises instructors authorised to instruct on the various classes of aircraft as follows :—

Landplanes	..	..	..	..	345
Gyroplanes	..	..	..	..	1
Landplanes and Seaplanes	..	..	..	..	15
Landplanes and Gyroplanes	..	..	..	..	3

*Navigators' Licences.*—An increase of 13 per cent is shown on the total number of licences issued during 1937, compared with the number issued in 1936. The number of licences current at the end of the year shows an increase of 40 per cent.

*Ground Engineers' Licences.*—The number of licences issued in 1937 shows an increase of 38 per cent over the number issued in 1936. The number of licences current at the end of the year shows an increase of 6 per cent.

*Radio Air Operators' Licences.*—The reduction in the number of new licences issued was due to a slight falling off in the number of applicants for examination and, to some extent, to the lower standard of the candidates examined. In 1936, the percentage of failures was 17 per cent, while for 1937 it increased to 37 per cent.

*Aerodrome Licences.*—The year 1937 marked a further decline in the number of new licences issued for aerodromes, only 71 new issues being made as compared with 202 in 1936. This decline is, however, considered to be relatively unimportant in regard to the progress of civil aviation, as it arises solely from a diminution in the activity of companies providing short pleasure flights and air displays at fields temporarily licensed as aerodromes for these purposes.

The totals for current licences for the years 1936 and 1937 comprised :—

	1936	1937
Permanent Aerodromes :—		
Public use .. .. .	58	62
Private use .. .. .	38	36
	96	98
Temporary Aerodromes :—		
Private use .. .. .	9	15
Total .. .. .	105	113

*Certificates of Registration.*—The figures given in the table show that the number of certificates of registration issued during 1937 was 687. Of these, 274 were in respect of aircraft registered for the first time, and 413 were for aircraft which changed ownership and



were registered afresh. The corresponding figures for 1936 were 1,024, 498 and 526, respectively. In addition to the aircraft included in the total of 1,660 shown as registered on 31st December, 1937, there were 67 aircraft which were temporarily unregistered at the end of the year.

*Certificates of Airworthiness.*—Of the total figure of 1,474 for the number of aircraft possessing current certificates of airworthiness at the end of 1937, 1,170 certificates were in respect of aircraft registered in Great Britain and Northern Ireland. The remaining 490 aircraft included in the total of 1,660 aircraft recorded as registered in this country but not certified as airworthy at the close of the year, comprised aircraft undergoing overhaul prior to renewal of their certificates of airworthiness, aircraft temporarily out of commission for various reasons, aircraft in process of construction, experimental aircraft, and 101 aircraft of various ultra-light types which have been permitted to be flown without being certified airworthy.

**Tables 2 (A) and 2 (B).**—Table 2 (A) shows the classification according to medical fitness of the applicants for Class "A" pilots' licences in 1937, together with an analysis by age of those applicants who were declared fit, and an analysis according to the kind of disability of those who were assessed as either temporarily or permanently unfit. Table 2 (B) gives similar information with regard to applicants for Class "B" pilots' licences, with the addition of an analysis according to age (as well as according to disability) of those who were declared either temporarily or permanently unfit.

**Table 3.**—This table gives an analysis of the aircraft entered in the United Kingdom register at the end of each of the years 1920–37, according to the purpose for which their owners have declared them to be used.

**Table 4.**—This table gives an analysis according to type of the aircraft entered in the United Kingdom register on 31st December, 1937.



TABLE 1  
**LICENCES AND CERTIFICATES**

(N.B.—Reference should be made to the notes on pages 27–29 in addition to those at the foot of the table.)

	New Licences or Certificates Issued.			Number of Licences or Certificates Current.		
	Year ended 31.12.35.	Year ended 31.12.36.	Year ended 31.12.37.	On 31.12.35.	On 31.12.36.	On 31.12.37.
Licences for Pilots (i) :—						
Class " A " .. .. .	1,368	2,447 (ii)	2,458 (ii)	3,353 (iii) 166 (iv)	4,357 (iii) 182 (iv)	4,694 (iii) 200 (iv)
Class " B " .. .. .	175	178	195	583	736	879
Master Pilot's Certificates	10	6	14	7 (iv)	12 (iv)	10 (iv)
Licences for Navigators	57	134	152	16 (v)	22 (v)	36 (v)
Licences for Ground Engineers	205	276	381	213	314	440
Radio Air Operators' Licences (vi) :—				1,336	1,521	1,618
Radiotelegraphy .. .. .	94	137	78	234 (v)	371 (v)	449 (v)
Radiotelephony .. .. .	98	74	44	288 (v)	362 (v)	406 (v)
Aircraft Radio Installation Licences (vi)	90	104	87	152	171	188
Licences for Aerodromes	453	202	71	117	105	113
Certificates of Registration :—						
Aircraft heavier-than-air .. .. .	1,054	1,024	687	1,535	1,682	1,660
Aircraft lighter-than-air .. .. .	—	—	—	3	3	3
Certificates of Airworthiness :—						
Aircraft heavier-than-air .. .. .	609	532	458	1,395 (vii)	1,497 (vii)	1,474 (vii)
Aircraft lighter-than-air .. .. .	—	—	—	—	—	—



NOTES.—(i) One hundred and eighty of the pilots holding current Class “B” licences held current Class “A” licences on 31.12.1937 and are included under both headings. The corresponding figures for 1935 and 1936 were approximately 120 and 125, respectively.

(ii) These figures include 891 and 1,025 short-period licences issued in the years ended 31st December, 1936, and 31st December, 1937, respectively, to civilian pupil pilots undergoing training for entry into the Royal Air Force. Two hundred and forty-nine of these licences were current on 31st December, 1937.

(iii) The current Class “A” licences include one pilot’s licence for balloons.

(iv) The figures in *italics* indicate the number of licences held by women.

(v) These figures represent the total number of certificates or licences issued to date, as master pilots’ certificates and radio air operators’ licences, unlike the other licences and certificates included in the table, normally remain valid indefinitely without renewal.

(vi) Radio air operators’ licences and aircraft radio installation licences are issued by H.M. Postmaster-General. Examinations and inspections are carried out by the Air Ministry.

(vii) The figures for 31st December of the years 1935, 1936 and 1937 include respectively 287, 287 and 304 certificates for aircraft not registered in Great Britain and Northern Ireland and mostly known to have been sold abroad.



TABLE 2 (A)  
**MEDICAL ASSESSMENTS FOR CLASS "A" PILOTS' LICENCES  
DURING 1937**

(1) Number of Applicants and their Classification

Type of Application.	Number of Applicants.	Classification at last Examination.		
		Fit.	Temporarily Unfit.	Permanently Unfit.
New .. ..	1,584	1,561	2	21
Renewal .. ..	3,080	3,073	2	5
Totals .. ..	4,664	4,634	4	26

(2) Analysis by age of "Fit" Applicants

Number of Applicants.	Ages.										
	20 and under.	21-25.	26-30.	31-35.	36-40.	41-45.	46-50.	51-55.	56-60.	Over 60.	Total.
	489	1,487	1,005	668	519	264	91	54	32	25	4,634

(3) Analysis of Causes of Unfitness

Disability.	New Licence.		Renewal.	
	Temporarily Unfit.	Permanently Unfit.	Temporarily Unfit.	Permanently Unfit.
Defect of Vision ..	—	13	—	2
Defect of Hearing ..	1	2	—	—
Medical .. ..	—	4	2	2
Surgical .. ..	1	2	—	1
Totals .. ..	2	21	2	5

TABLE 2 (B)  
**MEDICAL EXAMINATIONS AND ASSESSMENTS FOR CLASS "B"  
PILOTS' LICENCES DURING 1937**

(1) Number of Applicants and their Classification

Period.	Type of Application.	Number of Applicants.	Classification.		
			Fit (i)	Temporarily Unfit (ii)	Permanently Unfit.
January to June.	New .. Renewal ..	130 } 964 834 }	125 } 952 827 }	3 } 7 4 }	2 } 5 3 }
July to December.	New .. Renewal ..	110 } 984 874 }	102 } 964 862 }	5 } 16 11 }	3 } 4 1 }
Totals for 1937		1,948	1,916 (ii)	23 (iii)	9

NOTES (i), (ii), (iii)—See opposite page.



TABLE 2 (B)—*continued*.

**MEDICAL EXAMINATIONS AND ASSESSMENTS FOR CLASS "B"  
PILOTS' LICENCES DURING 1937**

**(2) Analysis of Applicants according to age and medical disability**

Classification, and No. of Applicants so classified.	Type of Application.	Age.						
		20 and under.	21- 25.	26- 30.	31- 35.	36- 40.	41- 45.	Over 45.
Fit : 1,114	New Renewal }	38	193	394	250	163	64	12
TEMPORARILY UNFIT : 23								
<i>Disability.</i>								
Defect of Vision	New ..	—	2	1	—	—	—	—
	Renewal ..	—	—	—	—	—	—	—
Defect of Hearing	New ..	—	—	—	—	—	—	—
	Renewal ..	—	1	—	—	—	—	—
Defective Physi- cal Efficiency.	New ..	1	1	—	—	—	—	—
	Renewal ..	—	—	3	1	—	2	—
Medical ..	New ..	2	—	—	—	—	—	—
	Renewal ..	—	1	1	1	1	—	1
Surgical ..	New ..	—	—	1	—	—	—	—
	Renewal ..	—	1	1	1	—	—	—
PERMANENTLY UNFIT : 9								
<i>Disability.</i>								
Defect of Vision	New ..	—	2	—	—	—	—	—
	Renewal ..	—	1	—	—	—	—	—
Defect of Hearing	New ..	1	—	—	—	—	—	—
	Renewal ..	—	—	—	—	—	—	—
Defective Physi- cal Efficiency.	New ..	—	—	—	1	—	—	—
	Renewal ..	—	—	—	—	—	—	—
Medical ..	New ..	—	1	—	—	—	—	—
	Renewal ..	—	—	1	1	—	—	—
Surgical ..	New ..	—	—	—	—	—	—	—
	Renewal ..	—	—	—	—	1	—	—

NOTES (*Table 2 (B)*).—(i) The figures given in the columns headed "Fit" and "Temporarily Unfit" represent the numbers of candidates so classified at their first examination.

(ii) Of the total 1,916 applicants shown as "Fit," 802 appear in both half years, giving a net total for the whole year of 1,114 applicants so classified at their first examination.

(iii) Of the total 23 applicants shown as "Temporarily Unfit," 15 were subsequently re-examined and declared "Fit." The remaining 8 had not applied for re-examination by the end of the year.



TABLE 3  
REGISTERED AIRCRAFT : CLASSIFICATION ACCORDING TO USE

Date.	Regular Air Trans- port.	Joy-riding Taxi and Mis- cellaneous Aerial Work.	Schools and R.A.F. Reserve Training.	Clubs (i).	Demon- stration, Experi- mental, Racing, etc. (ii).	Private (ii).	Held by Agents for Re-sale.	Registered.	Certified Air- worthy.
31st December—									
1920 ..	56	166	—	—	—	103	—	325	149
1921 ..	17	111	—	—	—	105	—	233	79
1922 ..	28	80	—	—	—	58	—	166	88
1923 ..	24	62	36	—	—	76	—	198	114
1924 ..	21	48	38	—	—	74	—	181	83
1925 ..	36 (iii)	42	44	10	53	16	—	201	104
1926 ..	27 (iii)	53	51	17	60	37	—	245	162
1927 ..	20	74	45	28	68	80	—	315	231
1928 ..	23	81	54	44	88	125	—	415	294
1929 ..	28	146	82	62	98	184	—	600	413
1930 ..	35	148	98	68	130	333	34	846	615
1931 ..	35	166	104	62	99	385	73	924	707
1932 ..	42	158	134	70	118	402	57	981	731
1933 ..	60	197	132	80	101	408	77	1,055	831
1934 ..	80	190	153	95	99	478	79	1,174	937
1935 ..	122	176	310	141	156	589	41	1,535	1,108
1936 ..	116	177	316	191	144	668	70	1,682 (iv)	1,210
1937 ..	117	145	327	198	117	672	84	1,660 (iv)	1,170

NOTES.—(i) Prior to 31.12.1929, aircraft used by unsubsidised clubs are not included in this column.

(ii) The aircraft shown as " Private " prior to 1925 are mostly aircraft used for demonstration purposes, etc. For all practical purposes, the private owner may be regarded as having been non-existent prior to 1925.

(iii) Several experimental aircraft are included in these figures.

(iv) These figures do not include, respectively, 57 and 67 aircraft temporarily unregistered on 31st December, 1936 and 1937.



TABLE 4

**REGISTERED AIRCRAFT : ANALYSIS ACCORDING TO TYPE**

The following is an analysis according to type of the total number of aircraft entered in the United Kingdom Register on 31st December, 1937 :—

	<i>Approximate per cent.</i>
1. D.H. 60 (" Moth ") (All types) .. .. .	12.0
2. D.H. 82 (" Tiger Moth ") .. .. .	11.0
3. B.A. " Swallow " .. .. .	4.5
4. D.H. 80A (" Puss Moth ") .. .. .	4.5
5. Miles " Hawk " (including " Hawk " Trainer Mk. III) ..	4.0
6. " Pou du Ciel " .. .. .	3.5
7. D.H. 85 (" Leopard Moth ") .. .. .	3.0
8. D.H. 89A and B (" Dragon Rapide ").. .. .	3.0
9. Avro " Avian " .. .. .	2.5
10. D.H. 87B (" Hornet Moth ") .. .. .	2.5
11. Blackburn B.2 .. .. .	2.0
12. D.H. 84 (" Dragon ") .. .. .	2.0
13. Percival " Vega Gull " .. .. .	2.0
14. Short " Empire Flying Boat " .. .. .	2.0
15. Avro 643 and 643 II .. .. .	1.5
16. B.A.C. " Drone " .. .. .	1.5
17. Miles " Whitney Straight " .. .. .	1.5
18. Aeronca C-3 .. .. .	1.0
19. Autogiro C.30A .. .. .	1.0
20. Avro 504N .. .. .	1.0
21. Avro 631 .. .. .	1.0
22. Avro 638 .. .. .	1.0
23. B.A. " Eagle " .. .. .	1.0
24. Comper " Swift " .. .. .	1.0
25. Desoutter Monoplane .. .. .	1.0
26. D.H. 83 (" Fox Moth ").. .. .	1.0
27. D.H. 86 .. .. .	1.0
28. D.H. 86A and B .. .. .	1.0
29. D.H. 87A (" Hornet Moth ") .. .. .	1.0
30. D.H. 90 and 90A (" Dragonfly ") .. .. .	1.0
31. Hillson " Praga " .. .. .	1.0
32. Miles " Falcon " .. .. .	1.0
33. Monospar S.T.25 .. .. .	1.0
34. Short " Scion " .. .. .	1.0
35. Spartan (Simmonds Spartan and Spartan 2- and 3- seaters)..	1.0
36. Miscellaneous types (each less than 1 per cent of total number of aircraft on Register).	19.0



## SECTION III

**AIRCRAFT :****TECHNICAL DETAILS AND EXPORT TRADE****Notes on the Tables**

**Table 1.**—Section (A) of this table gives technical details of all new type civil aircraft which were granted certificates of airworthiness in 1937, and Section (B) details of types with a gross weight of over 5,000 lb. which were built and flown during 1937, but had not been granted certificates of airworthiness by the end of the year. The following remarks apply to both sections of the table :—

*Column 1.*—Unless otherwise stated, all the aircraft are land-planes.

*Column 6.*—The weight given is that of the aircraft with operating equipment and cabin furnishings, but with fuel and oil tanks empty.

*Column 9.*—The pay load weight is obtained after allowing for the weight (at 170 lb. each) of the crew shown in column 7, and of fuel (at 7·45 lb., and 7·65 lb. per gallon for 87 and 70 octane value, respectively), and oil (at 9 lb. per gallon) to give the range in column 8 at the cruising speed in column 11.

**Table 2.**—This table gives technical details of the aero-engines which were approved for civil use for the first time in 1937. Many of these engines were originally developed for use in military aircraft.

**Table 3.**—This table shows the number and value of complete aircraft (including engines) and of separate engines, and the value of spare parts other than engines, exported from the United Kingdom during each of the years 1924–1937. It will be seen that the total value of the aircraft exports during 1937 was the highest on record.

**Table 4.**—Table 4 (A) shows the numbers and types of aircraft manufactured in the United Kingdom used by regular air transport companies in countries throughout the world. The names of the foreign companies concerned will be found in Table 4 (B). In the case of companies registered in the British Empire, the names of the companies employing the aircraft shown in Table 4 (A) can be ascertained by consulting the information regarding the companies' fleets given in Appendices C and D.



TABLE 1  
NEW TYPE CIVIL AIRCRAFT  
(A) New Types granted Certificates of Airworthiness during 1937

Manufacturer. Designation. Type of aircraft. Structure material.	No. of engines and take-off h.p. Type.	Span. ft. in.	Length. ft. in.	All-up weight (lb.).	Weight empty (lb.).	Typical performance.			Normal number of passen- ger seats.	Speed (m.p.h.).		
						Crew.	Range in still air in miles. (Con- sumption p.h.)	Payload capacity (lb.).		Maximum.	Cruising.	Stalling.
1	2	3	4	5	6	7	8	9	10	11		
The de Havilland Technical School "T.K.4." Low- wing racing monoplane. Wooden construction.	1 × 140 de Havilland "Gipsy Major II."	19 8	15 6	1,357	931	1	650 (8)	50	None	245	200	72
C. W. Aircraft Ltd. "Cyg- net." Low-wing mono- plane. Metal construction.	1 × 130 de Havilland "Gipsy Major I."	34 6	24 3	1,800*	1,250	1	440 (6½)	194*	1	150	130	40
Moss Brothers Aircraft Ltd. "Mosscroft M.A.I." Low- wing monoplane. Wooden construction.	1 × 95 Pobjoy "Niagara."	34 0	23 3	1,400	979	1	540 (4½)	85	1	130	115	37
Foster Winkner Aircraft Co. Ltd. "Wicko." High-wing monoplane. Wooden con- struction.	1 × 130 de Havilland "Gipsy Major I."	31 6	23 6	2,000	1,255	1	410 (6½)	400	1	140	122	40

\* For prototype only.

[Continued overleaf.



TABLE 1—continued.

## NEW TYPE CIVIL AIRCRAFT

(B) New Types with a gross weight of over 5,000 lb., built, but not granted Certificates of Airworthiness, during 1937

Manufacturer. Designation. Type of aircraft. Structure material.	No. of engines and take-off h.p. Type.	Span. Length.	All-up weight (lb.).	Weight empty (lb.).	Typical performance.				Normal number of passen- ger seats.	Speed (m.p.h.).		
					Crew.	Range in still air in miles. (Con- sumption p.h.)	Payload capacity (lb.).	Maximum.		Cruising.	Stalling.	
1	2	3	4	5	6	7	8	9	10	11		
		ft. in.	ft. in.									
Sir W. G. Armstrong Whitworth Aircraft Ltd. "Ensign." High-wing mono- plane. Metal construction.	4 × 880 Armstrong "Tiger IX."	123 0	110 6	48,500	33,000	5	760	8,150	27-40	200	165	71
The de Havilland Aircraft Co. Ltd. "Albatross." Low- wing monoplane. Special wooden construction.	4 × 530 de Havilland "Gipsy XII."	105 0	70 0	{ *32,000 †29,500	20,500 21,300	3 4	3,000 1,000	1,000 4,150	— 23	—	210	—
Percival Aircraft Ltd. "Q.6." Low-wing monoplane. Wooden construction.	2 × 205 de Havilland "Gipsy-Six II."	46 8	32 3	5,250	3,350	1	750 (20)	1,050	5	195	173‡	55
Short Bros. Ltd. Mayo Com- posite, lower component ("Maia"). High-wing mono- plane flying boat. Metal construction.	4 × 950 Bristol "Pegasus X."	114 0	85 0	38,000	25,000	5	850 (122)	6,000	18	199	160	65
Short Bros. Ltd. Mayo Com- posite, upper component ("Mercury"). High-wing monoplane float seaplane. Metal construction.	4 × 330 Napier "Rapier V."	73 0	51 0	20,800	10,320	2	3,500 (58)	700	Mail only.	205	175	75

\* As mail carrier.

† As passenger carrier.

‡ 182 m.p.h. with retractable undercarriage.



TABLE 2

**ENGINES APPROVED FOR CIVIL USE DURING 1937****Armstrong Siddeley Motors Ltd.****(1) "Tiger IX"**

*Type* : 14-cylinder, air-cooled, two row radial engine, with airscrew shaft reduction gear and gear-driven moderate altitude supercharger.

*International Rating* : 775/805 b.h.p. at 2,375 r.p.m. at 6,250 feet, and a boost pressure of  $+\frac{1}{4}$  lb. per sq. inch.

*Maximum Power* : 810 b.h.p. at 2,450 r.p.m. at 6,500 feet, and a boost pressure of  $+\frac{1}{4}$  lb. per sq. inch.

*Maximum Take-off Power* : 880 b.h.p. at 2,375 r.p.m., and a boost pressure of  $+\frac{1}{2}$  lb. per sq. inch.

*Specific Fuel Consumption* : .493 pints/b.h.p./hr. at 550 b.h.p. and 2,150 r.p.m.

*Fuel* : 87 octane.

*Dry Weight* : 1,260 lb.

**(2) "Tiger VIII"**

*Type* : 14-cylinder, air-cooled, two row radial engine, with airscrew shaft reduction gear and gear-driven two speed supercharger.

*International Rating* : Moderate altitude supercharger.—805/845 b.h.p. at 2,375 r.p.m. at 6,250 feet, and a boost pressure of  $+\frac{1}{2}$  lb. per sq. inch.

High altitude supercharger.—725/760 b.h.p. at 220 r.p.m. at 12,750 feet, and a boost pressure of  $+\frac{1}{2}$  lb. per sq. inch.

*Maximum Power* : Moderate altitude supercharger.—860 b.h.p. at 2,450 r.p.m. at 6,750 feet, and a boost pressure of  $+\frac{1}{2}$  lb. per sq. inch.

High altitude supercharger.—780 b.h.p. at 2,450 r.p.m. at 14,250 feet, and a boost pressure of  $+\frac{1}{2}$  lb. per sq. inch.

*Maximum Take-off Power* : 920 b.h.p. at 2,375 r.p.m., and a boost pressure of  $+\frac{1}{2}$  lb. per sq. inch.

*Fuel* : 87 octane.

*Dry Weight* : 1,345 lb.

**Blackburn Aircraft Ltd.****"Cirrus Major 150"**

*Type* : 4-cylinder, in line, inverted, direct drive airscrew shaft, naturally aspirated, air-cooled engine.

*International Rating* : 132/138 b.h.p. at 2,200 r.p.m. and full throttle at sea level.

*Maximum Power* : 149 b.h.p. at 2,450 r.p.m. and full throttle at sea level.

*Maximum Take-off Power* : 138 b.h.p. at 2,200 r.p.m. and full throttle.

*Specific Fuel Consumption* : .54 pints/b.h.p./hr. at 124 b.h.p. at 2,200 r.p.m.

*Fuel* : 70 octane.

*Dry Weight* : 308 lb.

**The Bristol Aeroplane Co. Ltd.****(1) "Mercury XII"**

*Type* : 9-cylinder, air-cooled radial engine, with airscrew shaft reduction gear and gear-driven moderate altitude supercharger.

*International Rating* : 780/820 b.h.p. at 2,400 r.p.m. at 3,500 feet, and a boost pressure of  $+\frac{3}{8}$  lb. per sq. inch.

*Maximum Power* : 890 b.h.p. at 2,750 r.p.m. at 6,000 feet, and a boost pressure of  $+\frac{3}{8}$  lb. per sq. inch.

*Maximum Take-off Power* : 830 b.h.p. at 2,650 r.p.m., and a boost pressure of  $+\frac{3}{8}$  lb. per sq. inch.

*Specific Fuel Consumption* : .537 pints/b.h.p./hr. at 570 b.h.p. and 2,400 r.p.m.

*Fuel* : 87 octane.

*Dry Weight* : 1,016 lb.



TABLE 2—continued.

(2) **“Hercules I”**

*Type* : 14-cylinder, two row, air-cooled sleeve valve radial engine, with airscrew shaft reduction gear and gear-driven moderate altitude supercharger.

*International Rating* : 1,100/1,150 b.h.p. at 2,400 r.p.m. at 5,000 feet, and a boost pressure of  $+ 1\frac{3}{4}$  lb. per sq. inch.

*Maximum Power* : 1,375 b.h.p. at 2,750 r.p.m. at 4,000 feet, and a boost pressure of  $+ 3\frac{1}{4}$  lb. per sq. inch.

*Maximum Take-off Power* : 1,290 b.h.p. at 2,650 r.p.m., and a boost pressure of  $+ 3\frac{1}{4}$  lb. per sq. inch.

*Fuel* : 87 octane.

*Dry Weight* : 1,643 lb.

**The de Havilland Aircraft Co. Ltd.****“Gipsy Twelve I”**

*Type* : 12-cylinder, air-cooled, inverted 60° Vee engine, with airscrew shaft reduction gear and gear-driven intermediate altitude supercharger.

*International Rating* : 390/410 b.h.p. at 2,400 r.p.m. at 7,750 feet, and boost pressure at zero.

*Maximum Power* : 415 b.h.p. at 2,450 r.p.m. at 8,000 feet and boost pressure at zero.

*Maximum Take-off Power* : 520 b.h.p. at 2,600 r.p.m., and a boost pressure of  $+ 3\frac{1}{2}$  lb. per sq. inch.

*Fuel* : 87 octane.

*Dry Weight* : 1,059 lb.

**J. A. Prestwick & Co. Ltd.****“Aeronca J.A.P., J.99”**

*Type* : Twin-cylinder, horizontally-opposed, direct drive airscrew shaft, naturally aspirated, air-cooled engine.

*International Rating* : 34/36 b.h.p. at 2,400 r.p.m. and full throttle at sea level.

*Maximum Power* : 38 b.h.p. at 2,650 r.p.m. and full throttle at sea level.

*Maximum Take-off Power* : 36 b.h.p. at 2,400 r.p.m. and full throttle.

*Specific Fuel Consumption* : .575 pints/b.h.p./hr. at  $32\frac{1}{2}$  b.h.p. at 2,400 r.p.m.

*Fuel* : 70 octane.

*Dry Weight* :  $126\frac{1}{2}$  lb.

**Rolls Royce Ltd.****“Merlin II”**

*Type* : 12-cylinder, liquid cooled, 60° Vee engine, with airscrew shaft reduction gear and gear-driven high altitude supercharger.

*International Rating* : 950/990 b.h.p. at 2,600 r.p.m. at 12,250 feet, and a boost pressure of  $+ 6\frac{1}{4}$  lb. per sq. inch.

*Maximum Power* : 1,030 b.h.p. at 3,000 r.p.m. at 16,250 feet, and a boost pressure of  $+ 6\frac{1}{4}$  lb. per sq. inch.

*Maximum Take-off Power* : 880 b.h.p. at 3,000 r.p.m., and a boost pressure of  $+ 6\frac{1}{4}$  lb. per sq. inch.

*Specific Fuel Consumption* : .53 pints/b.h.p./hr. at 685 b.h.p. and 2,600 r.p.m.

*Fuel* : 87 octane.

*Dry Weight* : 1,335 lb.



TABLE 3

**EXPORTS OF AIRCRAFT, ENGINES AND SPARE PARTS FROM  
THE UNITED KINGDOM**

Year.	Complete aircraft, including engines.		Engines.		Spare Parts (Value).	Total Value.
	No.	Value.	No.	Value.		
1924.. ..	188	£438,172	580	£449,335	£313,843	£1,201,350
1925.. ..	148	344,886	492	438,668	362,085	1,145,639
1926.. ..	150	391,471	266	296,347	430,821	1,118,639
1927.. ..	140	205,143	380	396,143	483,629	1,084,915
1928.. ..	358	450,552	432	348,606	527,714	1,326,872
1929.. ..	525	803,538	1,148	503,538	851,591	2,158,667
1930.. ..	317	601,287	552	539,541	909,093	2,049,921
1931.. ..	304	778,568	363	413,428	668,302	1,860,298
1932.. ..	300	641,428	452	467,409	632,985	1,741,822
1933.. ..	234	474,897	409	448,383	542,235	1,465,515
1934.. ..	298	746,550	479	592,536	582,016	1,921,102
1935.. ..	453	1,215,477	652	695,697	810,267	2,721,441
1936.. ..	448	1,284,961	625	741,191	896,986	2,923,138
1937.. ..	507	1,913,099	588	633,485	1,129,714	3,676,298

NOTE.—Details for earlier years are not available.











TABLE 4 (B)  
**FOREIGN AIR TRANSPORT COMPANIES EMPLOYING AIRCRAFT  
 MANUFACTURED IN THE UNITED KINGDOM**

Country.	Name of Air Transport Company.	Type of Aircraft.	No.*
Brazil ..	V.A.S.P. .. ..	De Havilland " Dragon " ..	1
		Monospar S.T.4 .. ..	2
		Total .. ..	3 (6)
Chile ..	Linea Aerea Nacional	De Havilland " Puss Moth " ..	2
		Total .. ..	2 (18)
China ..	Hui T'ung Aviation Co.	De Havilland " Puss Moth " ..	2
		Total .. ..	2 (9)
Colombia ..	S.C.A.D.T.A. ..	De Havilland " Puss Moth " ..	1
		Total .. ..	1 (22)
Czecho-slovakia.	State Air Lines (C.S.A.).	Airspeed " Envoy " ..	4
		Saunders Roe " Saro Cloud " ..	1
		Total .. ..	5 (30)
Egypt ..	Misr Airwork S.A.E.	De Havilland " Moth " ..	4
		De Havilland " Tiger Moth " ..	2
		De Havilland " Dragon " ..	1
		De Havilland " Leopard Moth." ..	1
		De Havilland " Express Air Liner." ..	3
		De Havilland " Hornet Moth." ..	1
		De Havilland " Dragon Rapide." ..	5
		De Havilland " Dragonfly " ..	1
		Total .. ..	18 (18)
Finland ..	Aero O/Y .. ..	De Havilland " Dragon Rapide." ..	1
		Total .. ..	1 (3)
France ..	Régie Air Afrique	De Havilland " Dragon " ..	3
		Total .. ..	3 (17)
Japan ..	Japan Air Transport Co.	Airspeed " Envoy " ..	13
		Total .. ..	13 (50)
Latvia ..	Post and Telegraph Department.	De Havilland " Dragon Rapide." ..	2
		Total .. ..	2 (2)

\* The figures shown in brackets in column 4 represent the total fleet of each company.



TABLE 4 (B)—*continued*.

**FOREIGN AIR TRANSPORT COMPANIES EMPLOYING AIRCRAFT  
MANUFACTURED IN THE UNITED KINGDOM**

Country.	Name of Air Transport Company.	Type of Aircraft.	No.*
Netherlands East Indies.	K.N.I.L.M. ..	De Havilland "Dragon Rapide."	2
		Total .. ..	2 (11)
Mexico ..	Cia de Aviacion Aero-Club de Tampico S.A.	Avro "Avian" .. ..	1
		Total .. ..	1 (3)
Portuguese East Africa.	Portuguese Aerial Colonial Services.	De Havilland "Hornet Moth."	1
		De Havilland "Dragon Rapide."	2
		De Havilland "Dragonfly"	1
		Total .. ..	4 (4)
Siam ..	Air Transport Co. Ltd.	De Havilland "Puss Moth"	3
		Total .. ..	3 (3)
Switzerland	Alpar .. {	Cierva "Autogiro C.30A" ..	1
		Monospar S.T.4 .. ..	1
		Total .. ..	2 (6)
	Swissair .. ..	De Havilland "Dragon Rapide."	1
		Total .. ..	1 (11)
Turkey ..	State Air Lines ..	De Havilland "Tiger Moth"	1
		De Havilland "Express Air Liner."	2
		De Havilland "Dragon Rapide."	4
		De Havilland "Dragonfly"	1
		Total .. ..	8 (9)
Uruguay ..	P.L.U.N.A. ..	De Havilland "Dragonfly"	2
		Total .. ..	2 (2)
Yugoslavia	Aeropout .. ..	De Havilland "Moth" ..	1
		De Havilland "Fox Moth"	1
		De Havilland "Dragon Rapide."	1
		Spartan "Cruiser" .. ..	2
		Total .. ..	5 (10)

\* The figures shown in brackets in column 4 represent the total fleet of each company.



## PART B

### EMPIRE AND WORLD STATISTICS

#### Preface

The tables contained in this Part are self-explanatory. Tables 1 and 2 contain statistics relating to the British Empire only, while Tables 3-6 cover foreign countries in addition to British Empire countries. For ease of reference, Empire countries other than the United Kingdom have been listed in the tables in alphabetical order, and, in certain cases, under abbreviated names, e.g. the Commonwealth of Australia has been listed as "Australia," and the Union of South Africa as "South Africa."



TABLE 1

**REGISTERED AIRCRAFT AND LICENSED PILOTS AND GROUND ENGINEERS IN BRITISH EMPIRE COUNTRIES**

The following table shows the numbers of registered civil aircraft and of licensed pilots and ground engineers at the end of 1937, compared with a year previously. Only aircraft and personnel registered or licensed in the particular territory are included in the figures.

	Registered Aircraft.			Pilots (ii).				Ground Engineers.	
	Commercial (i).		Totals.	Commercial.		Private.		1936.	1937.
	1936.	1937.		1936.	1937.	1936.	1937.		
United Kingdom .. ..	147	165	1,682	736	879	4,357	4,694	1,521	1,618
Australia (including New Guinea) ..	113	118	284	288	343	759	867	371	446
Burma (iii) .. ..	—	1	—	—	1	—	22	—	4
Canada .. ..	58	110	475	445	449	559	635	533	595
Ceylon .. ..	—	—	—	—	—	—	6	—	—
Eire .. ..	2	2	14	7	5	34	25	5	11
Federated Malay States .. ..	—	—	9	—	—	29	46	—	—
Hong Kong .. ..	—	—	6	—	4	25	23	3	5
India .. ..	25	25	126	66	77	219	236	73	106
Kenya .. ..	15	11	30	13	14	40	42	10	9
New Zealand .. ..	10	15	98	71	73	416	477	89	65
Northern Rhodesia .. ..	—	—	3	2	2	5	4	1	3
Nyasaland .. ..	—	—	2	1	1	6	9	1	2
Palestine .. ..	—	2	—	—	—	—	—	—	—
South Africa .. ..	12	23	132	55	86	250	329	57	80
Southern Rhodesia .. ..	6	7	21	13	16	24	44	9	14
Straits Settlements .. ..	—	—	14	—	—	61	91	—	—
Tanganyika .. ..	—	—	3	5	5	—	2	1	3
Totals .. ..	388	479	2,899	1,705	1,955	6,784	7,552	2,674	2,961

NOTES.—(i) Commercial aircraft are those registered under the names of regular air transport companies. The numbers of commercial aircraft are included in the total numbers of registered aircraft.

(ii) The figures given under "Pilots" represent the number of licences current. In certain cases, individual pilots held both "Commercial" and "Private" licences, and are, therefore, included under both these headings. (With regard to the United Kingdom figures, see Note (i) on page 31.)

(iii) The figures for Burma for 1936 are included under India.



TABLE 2

**LIGHT AEROPLANE CLUBS IN BRITISH EMPIRE COUNTRIES**

The following table shows the number of clubs in operation at the end of each of the years 1936 and 1937.

	Government-Assisted.		Unassisted.		Totals.	
	1936.	1937.	1936.	1937.	1936.	1937.
United Kingdom .. ..	48	53	30	24	78	77
Australia .. ..	7	7	3	4	10	11
Burma (i) .. ..	—	—	—	2	—	2
Canada .. ..	22	22	—	—	22	22
Ceylon .. ..	—	1	1	—	1	1
Eire .. ..	—	—	2	2	2	2
Federated Malay States ..	2	2	—	—	2	2
India .. ..	7(ii)	7(ii)	3	2	10	9
Kenya .. ..	1	1	—	—	1	1
New Zealand .. ..	11(ii)	11(ii)	1	1	12	12
Northern Rhodesia .. ..	—	—	1	1	1	1
Nyasaland .. ..	—	—	1	1	1	1
South Africa .. ..	2	2	—	—	2	2
Southern Rhodesia .. ..	—	—	2	3	2	3
Straits Settlements .. ..	2	2	—	—	2	2
Totals .. ..	102	108	44	40	146	148

NOTES.—(i) The figures for Burma for 1936 are included under India.

(ii) The figures given represent the number of organisations receiving direct assistance. Certain of these operate from more than one centre, or have a number of associated clubs.

TABLE 3

**REGULAR AIR SERVICES :****ROUTE MILEAGE AND MILES FLOWN THROUGHOUT THE WORLD**

	Route mileage (approx.).	Miles flown (partly estimated).
1919 .. ..	3,200	1,022,000
1920 .. ..	9,700	2,969,000
1921 .. ..	12,400	5,831,000
1922 .. ..	16,000	5,666,000
1923 .. ..	16,100	6,570,000
1924 .. ..	20,300	8,764,000
1925 .. ..	34,000	13,011,000
1926 .. ..	48,500	16,824,000
1927 .. ..	54,700	22,242,000
1928 .. ..	90,700	34,005,000
1929 .. ..	125,800	53,379,000
1930 .. ..	156,800	69,505,000
1931 .. ..	185,100	83,500,000
1932 .. ..	190,200	90,372,000
1933 .. ..	200,300	100,580,000
1934 .. ..	223,100	103,432,000
1935 .. ..	278,200	149,442,000
1936 .. ..	305,200	179,243,000
1937 .. ..	333,500	198,868,000



TABLE 4

## STATISTICS OF REGULAR AIR SERVICES OF PRINCIPAL COUNTRIES

The following statistics include, in some cases, unscheduled flights over the regular routes by the companies operating the scheduled services.

Country.	Year.	Route Mileage.	Miles Flown.	Passengers.		Mail (including Printed Matter and Parcels).		Goods (including Newspapers and Excess Baggage).	
				Number Carried.	Passenger Miles.	Tons.	Ton-Miles.	Tons.	Ton-Miles.
<i>British Empire.</i>									
United Kingdom (i)	1937	26,679	10,773,000	244,400	49,729,000	1,608·00	3,873,500	2,353·00	804,600
	1936	27,230	9,584,000	236,300	41,144,000	977·00	1,895,400	2,147·00	656,800
Australia (excluding New Guinea).	1937	23,821	6,804,917	58,954	23,868,689	118·45	*	382·06	*
	1936	17,675	4,307,694	31,879	11,797,413	63·90	*	235·67	*
Burma (ii)	1937	545	89,860	739	123,155	—	—	0·03	15
Canada	1937	14,036	9,136,626	116,438	12,053,711	545·48	*	10,817·58	*
	1936	13,446	7,100,401	109,723	9,581,886	518·33	*	10,244·24	*

\* Statistics not available.

NOTES.—(i) The figures include the operations of Imperial Airways Ltd. on the European, England-Malay States and Hong Kong, and England-Africa routes, together with the internal services operated in the United Kingdom.

(ii) Statistics for Burma prior to 1937 are included under "India."

[Continued overleaf.]



TABLE 4—continued.  
STATISTICS OF REGULAR AIR SERVICES OF PRINCIPAL COUNTRIES

Country.	Year.	Route Mileage.	Miles Flown.	Passengers.		Mail (including Printed Matter and Parcels).		Goods (including Newspapers and Excess Baggage).	
				Number Carried.	Passenger Miles.	Tons.	Ton- Miles.	Tons.	Ton- Miles.
<i>British Empire—contd.</i>									
Eire .. ..	1937	798	398,147	3,690	890,782	0·11	10	9·51	2,395
	1936	641	149,660	1,330	281,023	—	—	2·87	468
India .. ..	1937	4,122	531,531	434	121,701	61·19	52,333	1·69	1,358
	1936	2,970	551,943	349	120,008	49·41	*	0·45	*
Kenya .. ..	1937	2,754	295,360	1,878	*	36·67	11,670	8·70	5,640
	1936	1,200	144,137	1,068	302,388	8·30	2,485	3·74	2,370
Malaya .. ..	1937	385	95,710	818	221,735	0·63	220	14·00	5,390
New Guinea .. ..	1937	2,467	1,466,402	10,037	*	71·42	*	10,959·05	*
	1936	*	1,496,803	13,521	*	58·00	*	10,699·00	*
New Zealand .. ..	1937	1,588	1,194,021	38,310	4,607,589	82·92	14,857	30·46	3,098
	1936	1,030	706,125	21,512	2,336,172	38·14	6,991	16·65	1,768
Palestine .. ..	1937	60	18,000	1,500	*	—	—	—	—



South Africa	..	1937	5,983	1,090,495	20,391	5,413,204	318.54	191,298	359.59	99,220
		1936	3,126	629,516	15,312	4,074,215	102.80	29,122	257.86	77,709
Southern Rhodesia	..	1937	1,774	416,836	2,570	*	65.98	*	2.12	*
		1936	1,010	320,289	2,103	*	4.31	*	1.15	*
<i>Europe.</i>										
Austria	..	1937	2,504	494,021	19,501	*	80.07	*	434.28	*
		1936	2,525	387,068	15,467	2,369,349	49.41	9,849	176.17	28,500
Belgium	..	1937	10,694	1,596,784	30,384	8,710,781	134.41	80,621	536.98	125,355
		1936	9,850	1,379,781	26,291	6,894,482	88.04	57,173	506.83	120,018
Czechoslovakia	..	1937	3,794	1,171,093	34,360	5,738,282	47.22	(iii)	676.62	(iii) 140,009
		1936	3,695	932,401	16,257	3,961,872	21.23	7,836	251.96	59,248
Denmark	..	1937	1,992	343,961	13,293	1,479,551	116.57	30,670	212.82	51,697
		1936	1,666	285,430	8,035	1,459,719	93.14	24,874	184.90	48,171
Finland	..	1937	651	193,735	7,205	1,389,743	30.18	7,434	117.82	25,880
		1936	412	141,690	7,868	1,136,542	30.64	6,673	137.79	23,165
France	..	1937	37,387	8,031,489	79,864	31,622,968	531.60	603,399	1,214.26	586,543
		1936	34,211	7,005,700	58,236	21,966,123	343.12	431,909	1,008.06	423,185
Germany	..	1937	25,968	10,623,573	320,600	73,098,285	3,346.30	989,602	4,724.19	1,352,905
		1936	23,494	11,111,060	286,311	76,743,997	2,555.98	871,944	4,771.77	1,686,818
Greece	..	1937	547	219,366	6,479	1,441,487	9.33	2,159	180.40	40,153
		1936	547	278,227	6,670	1,415,499	12.98	2,956	118.01	25,536

\* Statistics not available.

NOTE.—(iii) The figure given under "Goods, ton-miles" is the total of goods and mail ton-miles.

[Continued overleaf.]



TABLE 4—continued.

## STATISTICS OF REGULAR AIR SERVICES OF PRINCIPAL COUNTRIES

Country.	Year.	Route Mileage.	Miles Flown.	Passengers.		Mail (including Printed Matter and Parcels).		Goods (including Newspapers and Excess Baggage).	
				Number Carried.	Passenger Miles.	Tons.	Ton- Miles.	Tons.	Ton- Miles.
<i>Europe—contd.</i>									
Hungary .. ..	1937	545	85,108	3,627	632,731	2·96	697	6·18	1,428
	1936	530	98,685	3,451†	645,548	11·74†	1,785	60·00†	7,353
Italy .. ..	1937	19,665	6,481,473	113,743	43,667,330	552·06	860,553	2,135·57	1,222,351
	1936	14,670	4,192,073	64,430	22,093,876	548·62	772,947	1,208·39	575,051
Netherlands .. ..	1937	14,891	5,263,141	120,577	30,032,693	652·30	931,555	1,649·58	676,172
	1936	14,308	3,884,295	67,142	22,474,309	390·35	549,079	1,039·80	383,514
Norway .. ..	1937	987	185,039	3,013	625,980	64·34	14,353	17·42	4,395
	1936	2,284	210,717	3,832	753,284	98·63	24,249	20·18	5,916
Poland .. ..	1937	3,551	1,162,018	33,308	6,379,684	118·54	(iii)	766·55	(iii) 637,289
	1936	2,715	864,966	24,772	4,578,807	35·52	6,785	317·01	58,161
Portugal .. ..	1937	283	29,221	210	59,372	2·26	636	1·41	370
	1936	283	28,207	193	54,522	1·75	495	1·30	367



Roumania	..	..	1937 1936	2,938 2,115	673,204 467,745	7,072 4,802	* *	(iv) 1.27	* *	(iv) 35.54 30.99	* *
Sweden	..	..	1937 1936	4,747 2,912	1,461,323 673,966	41,126† 21,111†	7,531,371 3,521,318	559.30† 368.48†	156,221 85,444	822.82† 477.35†	211,352 94,479
Switzerland	..	..	1937 1936	2,169 2,289	1,007,025 861,998	34,066 26,137	7,092,270 5,991,461	213.32 164.31	44,040 20,308	254.19 204.50	64,806 47,163
Yugoslavia	..	..	1937 1936	1,294 952	267,400 198,351	5,576 3,960	826,870 578,965	2.79 5.04	504 856	118.10 11.17	23,520 1,767
<i>Far East</i>											
Japan (v)	..	..	1936-7	4,258	1,887,317	20,996	4,037,194	351.66	72,780	82.62	16,761
Netherlands East Indies	..	..	1937 1936	4,084 3,174	955,000 677,502	17,601 11,350	3,006,257 2,569,400	29.19 26.93	* 16,615	76.06 68.11	313,971 24,334
Philippines	..	..	1937 1936	1,193 690	438,036 489,481	19,255 17,548	1,699,627 1,441,602	2.38 3.79	* 529	39.64 27.09	* 5,739
Siam (v)	..	..	1937-8 1936-7	420 420	79,686 78,941	61 28	5,488 1,560	14.13 8.78	* *	1.74 1.79	* *
<i>America</i>											
Argentina	..	..	1937 1936	1,581 1,424	205,346 198,615	1,281 1,057	* *	7.77 7.13	* *	29.20 27.98	* *

\* Statistics not available.

† "By stages."

NOTES.—(iii) The figure given under "Goods, ton-miles" is the total of goods and mail ton-miles.

(iv) The figure given under "Goods, tons" is the total of goods and mail.

(v) The figures cover the periods 1st April-31st March for the years given.

[Continued overleaf.]



TABLE 4—continued.  
STATISTICS OF REGULAR AIR SERVICES OF PRINCIPAL COUNTRIES

Country.	Year.	Route Mileage.	Miles Flown.	Passengers.		Mail (including Printed Matter and Parcels).		Goods (including Newspapers and Excess Baggage).	
				Number Carried.	Passenger Miles.	Tons.	Ton- Miles.	Tons.	Ton- Miles.
<i>America—contd.</i>									
Bolivia .. ..	1937	3,605	401,660	15,235	1,570,810	24.14	*	1,103.46	*
	1936	1,586	386,628	14,146	*	15.09	*	1,161.00	*
Brazil .. ..	1937	8,685	*	*	*	*	*	*	*
	1936	7,491	1,185,470	16,317	6,692,901	66.93	76,068	266.76	124,901
Chile .. ..	1937	1,829	552,189	3,813	1,846,534	9.34	*	10.14	*
	1936	1,648	589,531	4,030	1,850,273	8.06	*	10.19	*
Colombia .. ..	1937	3,777	*	*	*	*	*	*	*
	1936	3,541	1,299,247	28,942	*	44.15	*	2,658.79	*
Hawaii .. ..	1937	347	383,117	21,692	2,960,531	4.94	823	30.62	*
	1936	329	307,934	18,074	2,539,818	8.71	1,408	28.65	4,241
United States of America ..	1937	63,656	76,996,163	1,267,580	549,628,407	9,297.77	*	3,979.49	*
	1936	61,532	73,303,836	1,147,969	491,744,053	8,180.36	*	3,727.68	*

\* Statistics not available.



TABLE 5  
CIVIL AIRCRAFT REGISTERED IN COUNTRIES THROUGHOUT  
THE WORLD

Country.	Date of Effect.	Number of Civil Aircraft Registered under Regular Air Transport Companies.	Total Number of Civil Aircraft Registered.
<b>British Empire</b>			
United Kingdom .. .. .	31.12.1937	165	1,660
Australia (including New Guinea)	1. 1.1938	118	339
Burma .. .. .	1. 1.1938	1	9
Canada .. .. .	1. 1.1938	110	604
Ceylon .. .. .	1. 1.1938	Nil	3
Eire .. .. .	1. 1.1938	2	15
Federated Malay States .. ..	1. 1.1938	Nil	14
Hong Kong .. .. .	1. 1.1938	Nil	8
India .. .. .	1. 1.1938	25	148
Kenya .. .. .	1. 1.1938	11	28
New Zealand .. .. .	1. 1.1938	15	93
Northern Rhodesia .. .. .	1. 1.1938	Nil	2
Nyasaland .. .. .	1. 1.1938	Nil	2
Palestine .. .. .	1. 1.1938	2	2
South Africa .. .. .	17. 1.1938	23	219
Southern Rhodesia .. .. .	1. 1.1938	7	26
Straits Settlements .. .. .	1. 1.1938	Nil	20
Tanganyika .. .. .	1. 1.1938	Nil	5
Total .. .. .		479	3,197
<b>Foreign Countries.</b>			
<i>Europe—</i>			
Austria .. .. .	1. 1.1937	7	59
Belgium .. .. .	31.12.1937	31	187
Czechoslovakia .. .. .	1. 1.1938	41	407
Danzig .. .. .	1. 1.1938	Nil	1
Denmark .. .. .	13.12.1937	6	32
Estonia .. .. .	31.12.1937	Nil	10
Finland .. .. .	20. 4.1938	4	22
France .. .. .	1. 1.1938	154	2,474
Germany .. .. .	18.12.1937	153	*
Greece .. .. .	1. 1.1938	4	9
Hungary .. .. .	1. 1.1938	4	82
Italy .. .. .	1. 1.1938	110	519
Latvia .. .. .	8. 4.1938	2	12
Netherlands .. .. .	1. 1.1938	42	113
Norway .. .. .	31.12.1937	9	25
Poland .. .. .	31.12.1937	41	190
Portugal .. .. .	1. 1.1937	1	12
Roumania .. .. .	1. 1.1938	9	132
Sweden .. .. .	1. 1.1938	15	62
Switzerland .. .. .	31.12.1937	17	103
Yugoslavia .. .. .	31.12.1937	10	10
Total .. .. .		660	*

\* Not known.

[Continued overleaf.]



TABLE 5—*continued.***CIVIL AIRCRAFT REGISTERED IN COUNTRIES THROUGHOUT THE WORLD**

Country.	Date of Effect.	Number of Civil Aircraft Registered under Regular Air Transport Companies.	Total Number of Civil Aircraft Registered.
<b>Foreign Countries—<i>continued.</i></b>			
<i>Near East—</i>			
Portuguese East Africa	31.12.1937	4	8
Egypt .. .. .	1. 1.1938	18	27
Turkey .. .. .	31.12.1937	9	*
Iraq .. .. .	23. 3.1938	Nil	9
Total .. .. .		31	*
<i>Far East</i>			
Japan .. .. .	1. 1.1938	55	119
China .. .. .	1.12.1936	39	*
Philippine Islands .. .. .	1. 1.1938	11	50
Siam .. .. .	31.12.1937	3	3
Netherlands East Indies .. .. .	31.12.1937	11	28
Total .. .. .		119	*
<i>America—</i>			
U.S.A. .. .. .	1. 1.1938	415	10,836
Argentina .. .. .	31. 3.1938	10	170
Bolivia .. .. .	23.10.1937	13	*
Brazil .. .. .	31. 3.1938	41	90
Chile .. .. .	30. 3.1938	14	*
Colombia .. .. .	19. 4.1937	33	35
Costa Rica .. .. .	1. 5.1938	16	17
Cuba .. .. .	13.11.1937	8	14
Mexico .. .. .	31. 7.1937	90	110
Peru .. .. .	8. 7.1937	12	25
Salvador .. .. .	16. 8.1937	2	2
Uruguay .. .. .	20. 8.1937	2	16
Venezuela .. .. .	15.10.1937	7	11
Honduras .. .. .	4.10.1937	27	*
Total .. .. .		690	*
Grand Total .. .. .		1,979	*

\* Not known.



TABLE 6  
CIVIL AVIATION VOTES AND DIRECT AIR TRANSPORT SUBSIDIES OF PRINCIPAL COUNTRIES OF THE WORLD  
N.B.—All currency conversions have been carried out at "par" rates.

Country.	Financial Year.	Total Civil Aviation Vote.	Direct Air Transport Subsidy.
<i>British Empire.</i>			
United Kingdom .. .. .	1.4.1937-31.3.1938 1.4.1936-31.3.1937	£ 2,733,500 (i) 912,500 (i)	£ 650,000 (i) 291,000 (i)
Australia .. .. .	1.7.1937-30.6.1938 1.7.1936-30.6.1937	583,422 480,920	173,242 210,450
Bermuda .. .. .	1.1.1937-31.12.1937 1.1.1936-31.12.1936	4,020 6,210	3,320 1,810
Burma .. .. .	1.4.1937-31.3.1938	Rs. 3,94,410	£ (29,588)
Canada .. .. .	1.4.1937-31.3.1938 1.4.1936-31.3.1937	\$ 2,899,273 1,609,200	£ (595,823) (330,703)
Ceylon .. .. .	1.10.1937-30.9.1938 1.10.1936-30.9.1937	Rs. 52,370 1,93,059	£ (3,929) (14,483)
			\$ 705,000 (ii) 314,500 (ii)

[Continued overleaf.]

NOTES.—(i) These figures do not include the following sums representing contributions from Dominion and Colonial sources towards the cost of operation of the Empire air services :—

1937/38 .. .. £141,000  
1936/37 .. .. £112,000

(ii) The sums given under "Direct Air Transport Subsidy" are the amounts provided for payments to air mail contractors.



TABLE 6—continued.  
CIVIL AVIATION VOTES AND DIRECT AIR TRANSPORT SUBSIDIES OF PRINCIPAL COUNTRIES OF THE WORLD

Country.	Financial Year.	Total Civil Aviation Vote.	Direct Air Transport Subsidy.
<i>British Empire—contd.</i>			
Eire .. .. .	1.4.1937–31.3.1938 1.4.1936–31.3.1937	£ 355,307 47,200	— —
Gambia .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	£ 970 1,400	— —
Gold Coast .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	£ 41,000 75,000	— —
Hong Kong .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	\$ 70,148 38,831	— —
India .. .. .	1.4.1937–31.3.1938 1.4.1936–31.3.1937	Rs. 25,04,000 23,80,000	— —
Kenya .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	£ 17,730 17,912	£ 15,000 15,000
Malaya .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	\$ 193,411 138,450	— —



New Zealand	.. ..	1.4.1937-31.3.1938 1.4.1936-31.3.1937	£ 42,040 21,914	— —
Nigeria	.. ..	1.1.1937-31.12.1937 1.1.1936-31.12.1936	£ 47,921 112,402	— —
Northern Rhodesia	.. ..	1.1.1937-31.12.1937 1.1.1936-31.12.1936	£ 3,220 3,890	£ 2,000 2,000
Nyasaland	.. ..	1.1.1937-31.12.1937 1.1.1936-31.12.1936	£ 995 390	— —
Palestine	.. ..	1.1.1937-31.12.1937 1.1.1936-31.12.1936	£ 15,458 13,543	— —
South Africa..	.. ..	1.4.1937-31.3.1938 1.4.1936-31.3.1937	£ 37,040 52,925	£ 20,000 34,000
Southern Rhodesia ..	.. ..	1.4.1937-31.3.1938 1.4.1936-31.3.1937	£ 18,551 16,024	£ 15,500 11,000
Sudan (iii)	.. ..	1.1.1937-31.12.1937 1.1.1936-31.12.1936	£ 19,000 5,000	£ 5,000 5,000

NOTES.—(iii) Anglo-Egyptian Condominium.

[Continued overleaf.]

TABLE 6—continued.

## CIVIL AVIATION VOTES AND DIRECT AIR TRANSPORT SUBSIDIES OF PRINCIPAL COUNTRIES OF THE WORLD

Country.	Financial Year.	Total Civil Aviation Vote.	Direct Air Transport Subsidy.
<i>British Empire—contd.</i>			
Tanganyika .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	£ 8,339 14,596	£ 3,088 12,000
Uganda .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	£ 34,225 10,500	£ 10,000 10,000
Zanzibar .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	Rs. 13,330 4,732	— —
<i>Europe.</i>			
Austria .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	Schillings 1,800,000 1,946,900	£ (34,702) (36,949)
Belgium .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	Francs 23,782,503 22,214,010	£ (82,000) (84,857)
Czechoslovakia .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	Crowns 46,517,400 72,547,900	£ (114,546) (106,634)
Denmark .. .. .	1.4.1937–31. 3.1938 1.4.1936–31. 3.1937	Kroners 526,330 542,942	£ (13,774) (iv) (13,774) (iv)



		1.1.1937-31.12.1937 1.1.1936-31.12.1936	F. Marks 13,000,000 19,228,332.5	£ (67,276) (99,509)	F. Marks 3,186,000 (iv) 3,186,000 (iv)	£ (16,488) (iv) (16,488) (iv)
Finland	.. .. .					
France	.. .. .	1.1.1937-31.12.1937 1.1.1936-31.12.1936	Francs 260,257,906 (v) 175,620,595 (iv)	£ (2,095,305) (v) (1,413,851) (iv)	Francs 187,050,000 148,500,000	£ (1,505,917) (1,195,532)
Germany*	.. .. .	—	—	—	—	—
Greece	.. .. .	1.4.1937-31.3.1938 1.4.1936-31.3.1937	Drachmae 19,518,004 19,445,005	£ (52,048) (51,853)	Drachmae 16,311,000 16,311,000	£ (43,496) (43,496)
Italy ..	.. .. .	1.7.1937-30.6.1938 1.7.1936-30.6.1937	Lire 98,824,500 74,400,102	£ (1,068,836) (804,677)	Lire 80,800,000 71,300,102	£ (873,892) (771,146)
Netherlands ..	.. .. .	1.1.1937-31.12.1937 1.1.1936-31.12.1936	Florins 1,202,295 1,183,501	£ (99,281) (97,729)	Florins 547,800 547,800	£ (45,235) (45,235)
Norway	.. .. .	1.7.1937-30.6.1938 1.7.1936-30.6.1937	Kroners 1,798,500 1,732,700	£ (99,091) (95,466)	Kroners 405,000 405,000	£ (22,314) (22,314)
Poland	.. .. .	1.1.1937-31.12.1937 1.1.1936-31.12.1936	Zloty 16,937,000 16,437,000	£ (390,433) (378,907)	Zloty 5,900,000 5,900,000	£ (136,007) (136,007)
Roumania	.. .. .	1.4.1937-31.3.1938 1.4.1936-31.3.1937	Lei 17,306,856 21,743,456	£ (21,727) (26,725)	Lei 8,422,306 8,052,784	£ (10,352) (9,898)
Sweden	.. .. .	1.7.1937-30.6.1938 1.7.1936-30.6.1937	Kroners 1,403,500 1,168,400	£ (77,327) (64,375)	Kroners 1,012,500 821,100	£ (55,785) (45,240)

\* Information not available.

NOTES.—(iv) Subsidy provided by the Government only. In addition, there are other subsidies provided by towns, municipalities, cantons, etc. (v) Includes only sums directly assignable to civil aviation. [Continued overleaf.]

TABLE 6—continued.

## CIVIL AVIATION VOTES AND DIRECT AIR TRANSPORT SUBSIDIES OF PRINCIPAL COUNTRIES OF THE WORLD

Country.	Financial Year.	Total Civil Aviation Vote.	Direct Air Transport Subsidy.
<i>Europe—contd.</i>			
Switzerland .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	Francs 715,000 738,786	Francs 495,000 (iv) 425,444 (iv)  £ (19,627) (iv) (16,869) (iv)
Yugoslavia .. .. .	1.4.1937–31.3.1938 1.4.1936–31.3.1937	Dinar 16,095,974 11,347,400	Dinar 10,709,410 7,295,840  £ (38,760) (26,404)
<i>Far East.</i>			
Japan .. .. .	1.4.1937–31.3.1938 1.4.1936–31.3.1937	Yen 14,312,336 6,535,858	Yen 1,070,000 2,095,769  £ (109,184) (213,853)
Netherlands East India .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	Florins 756,590 584,380	Florins 240,000 400,000  £ (19,818) (33,031)
<i>America.</i>			
United States of America .. .. .	1.7.1937–30.6.1938 1.7.1936–30.6.1937	\$ 37,186,039 29,718,089	\$ 24,117,360 (ii) 21,374,000 (ii)  £ (4,956,301) (ii) (4,392,520) (ii)
Argentina .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	Pesos 1,682,400 1,892,440	Pesos 780,000 180,000  £ (52,000) (12,000)
Bolivia .. .. .	1.1.1937–31.12.1937 1.1.1936–31.12.1936	— —	Bolivianos 160,000 189,443  £ (12,003) (14,212)

NOTES.—(ii) The sums given under "Direct Air Transport Subsidy" are the amounts provided for payments to air mail contractors.

(iv) Subsidy provided by the Government only. In addition, there are other subsidies provided by towns, municipalities, cantons, etc.



## INVESTIGATION OF ACCIDENTS TO CIVIL AIRCRAFT

## UNITED KINGDOM AIRCRAFT

During the year, 37 accidents occurred in Great Britain and Northern Ireland which caused fatal or serious injury to persons carried in civil aircraft registered in the United Kingdom; in none of these accidents, however, was the aircraft flying on a regular passenger service. There were also six minor accidents, including two to aircraft engaged on regular services, which, although without serious consequences beyond damage to material, involved aircraft flying for hire or reward and therefore required notification under the Regulations. In addition, four accidents, with fatal consequences, occurred abroad to aircraft of Imperial Airways Ltd. The total number of accidents under review, therefore, is 47, compared with 60 in 1936.

In two of the above-mentioned accidents, third parties on the ground were fatally injured. In addition, there was one case in which a passenger, after disembarking from a small twin-engined aircraft, passed too close to the revolving airscrew and was struck on the head and injured. There were no parachuting mishaps during the year.

Two accidents occurred to gliders: one caused fatal injuries to the pilot, but in the other case the pilot escaped practically unhurt.

The following table gives the number of accidents under review in the various classes of flying:—

		<i>Serious but</i>		
		<i>Fatal.</i>	<i>non-fatal.</i>	<i>Minor.</i>
1. Subsidised Regular Services	..	4	—	1
2. Unsubsidised Regular Services	..	1	—	1
3. Other Flying for Hire	..	1	—	4
4. Subsidised Club Flying	..	6	1	*
5. Other Club and School Flying	..	2	—	*
6. Private Flying	..	15	7	*
7. Racing and Exhibition Flying	..	2	—	*
8. Aircraft Tests and Trials	..	2	—	*

\* Minor accidents involving aircraft which, at the time, are not being used for public transport or other commercial purpose, including instructional flying for which a paid instructor is employed, do not require to be notified under the Regulations.

## Causes of Accidents

Of the total accidents, about 60 per cent. were, in the opinion of the Chief Inspector, attributable solely to errors of judgment or faulty airmanship, but in two accidents which occurred in the course of "private" flying, although the pilots were inexperienced, the aerodynamic qualities of the aircraft might be considered to have been a contributory cause.

Power-plant failure occurred as a contributory cause of four major and two minor accidents. There were also two cases in which structural failure in the air resulted in fatal accidents.

Bad visibility was the primary cause of two serious accidents, one of which had fatal consequences, and "ice-accretion" was most probably the main factor in another fatal accident due to weather conditions.

One fatal accident was due to collision with an obstacle on the ground, the aircraft colliding with a tree which the pilot (a pupil) had failed to observe.

In two cases, passengers were thrown from the aircraft in mid-air, one during acrobatic manoeuvres and the other by an abnormal "bump."

Two aircraft flown by "private" pilots disappeared over the sea and another crashed into the sea in the vicinity of a small steamer. In the latter case, the passenger was rescued but the pilot sank with the wreck.



Briefly, the circumstances in which the major or more serious accidents occurred were as follows :—

#### **Subsidised Regular Services**

*Note.*—In all four accidents of this category aircraft of Imperial Airways Ltd. were involved.

1. A landplane, operating on the night service from London to Cologne, failed to arrive at its destination. The burnt-out remains of the aeroplane were found in a forest to the west of Cologne early on the following day. All three occupants, who were employees of the Company, were killed.

2. A flying boat, operating on the Empire routes, was flying over mountainous country in central France. While making a gradual descent through snow clouds, it struck the ground near the summit of a hill at a point some 2,400 feet above sea level. The captain, three members of the crew and the one passenger were killed, but the radio-operator escaped with slight injuries. The possibility of "ice-formation" having occurred and having contributed towards the accident can reasonably be dismissed.

3. A flying boat, operating on the Empire routes, crashed and foundered when the pilot attempted to alight on a glass-calm water, at a normal port of call in the Mediterranean. Three passengers lost their lives, but the captain, crew and remaining six passengers escaped serious injury.

4. When the captain of a flying boat operating on the Empire routes attempted to take-off, the aircraft after running on the water normally for some distance, commenced to "porpoise" and finally rose into the air in a stalled condition. It then dived into the water at a steep angle. There was only a light wind at the time and the sea was calm. The steward and one passenger were killed and the radio-operator and five passengers were injured, but the captain, three of the crew and one passenger escaped unhurt.

#### **Unsubsidised Regular Services**

A freight-carrying aeroplane took off before dawn in stormy weather, and while flying at an altitude of about 1,000 feet, just below the cloud base, crashed into trees near the summit of a hill. Both occupants were instantly killed.

#### **Other Flying for Hire**

An aeroplane was operating for the purpose of giving short pleasure flights. After a dive, the aircraft was seen to climb very steeply until, through an error of airmanship on the part of the pilot, it fell into an inverted attitude and then dived to the ground. The pilot and three of the passengers were killed, but the remaining two passengers, though injured, survived.

#### **Subsidised Club Flying**

1. The pilot, while manœuvring at a very low altitude over the foreshore at a seaside resort, accidentally stalled the aeroplane in a turn. The machine crashed to the ground and burst into flames. The pilot escaped with injuries, but the passenger was killed.

2. During a gliding approach to an aerodrome, the aeroplane collided with the top branches of a tree which the pilot, a pupil, had failed to notice. The machine crashed to the ground and burst into flames. The pilot was fatally injured.

3. An error of judgment on the part of the pilot caused the aeroplane to stall in a turn at a height which, having regard to the pilot's very limited experience, hardly permitted of recovery from the ensuing dive in time to avoid a crash. The machine was wrecked and the pilot, the sole occupant, was killed.

4. After a series of acrobatic manœuvres which were carried out in dangerous proximity to a crowd of people at a carnival, the pilot finally executed an intentional spin from which he failed to recover in time to prevent the aeroplane diving to the ground. The machine was completely wrecked and both occupants instantly killed.



5. An error of judgment on the part of the pilot caused the aeroplane to stall while manœuvring at a low altitude over the sea. The aircraft dived into the water and the pilot, who was the sole occupant, was killed.

6. While manœuvring to land on an aerodrome, the pilot accidentally stalled the aeroplane at a height of about 100 feet. In the resulting crash, both he and his passenger were seriously injured.

7. The pilot, who had had very little flying experience and had not previously flown the particular type of aeroplane involved, accidentally caused the aircraft to fall into a spinning nose dive at a height which did not permit recovery of control. The pilot, who was the sole occupant, was killed.

### **Other Club and School Flying**

1. A structural failure, involving the starboard planes of the aircraft, occurred when the pilot was executing an acrobatic manœuvre. The aeroplane fell to the ground and was completely destroyed by fire, which broke out on impact with the ground. Both occupants were instantly killed.

2. An error of judgment on the part of a very inexperienced pilot caused the aeroplane to stall in a gliding turn and dive into a reservoir. The pilot, the sole occupant, was killed.

### **Private Flying**

1. During a flight over the open sea, the aeroplane encountered very bad weather, and crashed into the water, which, at the time, was very rough. The pilot, who was not wearing his life-belt, sank with the wreckage, but the passenger was rescued practically unhurt, by a small steamer, in whose vicinity the pilot had manœuvred before the crash.

2. On a cross-country flight over hilly country, when the hills were enveloped in low clouds, the aeroplane collided with a hill at a point about 1,500 feet above sea level. Fire occurred on impact, and all four occupants were killed.

3. An inexperienced pilot accidentally stalled the aeroplane on a climbing turn at a height which did not permit of recovery in time to avoid a crash. The pilot was killed. The aircraft was a single-seater of the "ultra-light" type which had practically no reserve of power and of which the aero-controls were very sensitive.

4. The pilot embarked on a short solo cross-country flight, but failed to return. Parts of the aircraft were subsequently washed up on the sea-shore and the pilot's death must, therefore, be presumed.

5. On a long cross-country flight the pilot encountered thick fog. He attempted to turn back but, in the turn, lost control of the aeroplane, which crashed. Both pilot and passenger were seriously injured.

6. When the pilot attempted to take off from a private aerodrome, the engine failed to develop full power and the aeroplane collided with the boundary wall. The aircraft was wrecked, and the pilot, the sole occupant, was killed.

7. While manœuvring over a village at a low altitude, the pilot accidentally stalled the aeroplane, which was of the "ultra-light" type, at a height which did not permit of recovery of normal flight. The pilot was very seriously injured, and the passenger was killed.

8. During acrobatic manœuvres, the passenger fell from the aeroplane and was killed. An examination of the safety-belt after the aircraft had landed safely, revealed no evidence of any defect in the belt or its attachments.

9. An error of airmanship on the part of the pilot caused the aeroplane to stall in a turn at a height which did not permit recovery from the ensuing spin in time to regain control of the aircraft, which crashed into a wood. The pilot was only slightly injured, but the passenger was killed.

10. While manœuvring at a low altitude in the vicinity of a field in which he intended to land to ask his way, the pilot accidentally stalled the aeroplane in a turn. The machine fell to the ground and was wrecked. The pilot was killed, but the two passengers escaped with slight injuries.



11. An error of judgment on the part of the pilot caused the aircraft, an "ultra-light" aeroplane of which he had very little experience, to stall in a gliding turn at a height of about 30 feet. The aeroplane was wrecked and the pilot seriously injured.

12. While the pilot was manœuvring at a low altitude in the vicinity of an open space in an attempt to locate his position, the aeroplane, which was of the same "ultra-light" type as that concerned in case 3 above, fell into a left-hand spin, which continued to the ground. The pilot was killed.

13. For some reason which it has not been found possible to determine, but which may have been shortage of fuel in one of the two separate supply tanks, the engine ceased to function when the aeroplane was flying at a height of approximately 1,000 feet over a town. During the forced descent towards an open piece of ground, on which a landing would have been possible, an error of pilotage led to the aircraft losing flying speed and falling into an incipient spin at a fatally low altitude. All four occupants were killed.

14. The aircraft passed over Holyhead *en route* to Dublin but it failed to arrive at its destination, and no trace of it has since been found. It must, therefore, be presumed that the pilot, who was the sole occupant, perished.

15. Immediately after taking off from an aerodrome, and when at a height of about 75 feet, the aeroplane stalled, owing to sudden failure of engine power, and finally collided with a tree. The pilot was seriously injured, but the passenger escaped unhurt.

16. An error of judgment on the part of an inexperienced pilot, carrying out solo flying practice, caused the aeroplane to stall in a gliding turn at a height which did not permit recovery from the resultant spin. The pilot was killed.

17. While manœuvring over an aerodrome, the pilot accidentally stalled the aeroplane (which was of an "ultra-light" type) in a turn at a height which did not permit recovery from the resultant spin. The pilot was killed.

18. An error of judgment on the part of the pilot caused the aeroplane to stall and fall into a spinning nose dive at a height which barely permitted recovery in time to avert a crash. Both occupants were seriously injured.

19. The pilot attempted to continue a cross-country flight over hilly country in bad weather, against the advice of control officers. After narrowly averting collision with a tall tree, in bad visibility, he attempted to execute a landing, but the aircraft struck another tree and crashed to the ground. The pilot was injured, but both the passengers escaped practically unhurt.

20. While manœuvring to land, the pilot accidentally stalled the aeroplane in a gliding turn at a height which did not permit recovery. The machine dived to the ground and was immediately enveloped in flames. All three occupants were instantly killed.

21. An error of airmanship on the part of the pilot when approaching an aerodrome to land, caused the aeroplane, which was of an "ultra-light" type, to stall at a height of about 30 feet. The machine was completely wrecked. The pilot was injured, but the passenger escaped unhurt.

22. During a cross-country flight, in foggy weather, the engine suddenly ceased to function, and in the subsequent forced landing the aeroplane collided with a hedge and crashed. The pilot was injured, but the passenger escaped unhurt.

### **Racing and Exhibition Flying**

1. An error of judgment on the part of the pilot caused the aeroplane to lose height on a steep turn just after taking off, with the result that the aircraft crashed into a house and burst into flames on impact. Both pilot and passenger were killed, and one person in the house was fatally injured. The remaining two occupants of the house were rescued, but suffered injury from burning.



2. While negotiating a turning point in a race at a very low altitude, the aeroplane encountered a very severe atmospheric disturbance. One occupant was thrown from the aeroplane in mid-air and the other was killed in the subsequent crash.

### **Aircraft Tests and Trials**

1. A structural failure of the port main plane occurred very shortly after the aeroplane had taken off in somewhat gusty weather, and the machine crashed. The pilot, who was also the designer, was killed. The failure must be attributed to the unsatisfactory design of the main planes of the aircraft.

### **FOREIGN AIRCRAFT**

Only one serious accident to foreign commercial aircraft occurred in the United Kingdom during the year 1937.

On the commencement of a scheduled night-mail service from Croydon Airport, a German aeroplane took off, in thick fog, in a west to east direction. Almost immediately after it left the ground the aircraft collided with a hangar at a point about 30 feet above ground level. Fire broke out on impact, the aircraft was destroyed, and extensive damage was caused to the hangar and its contents. All three members of the crew were instantly killed.

There was also one serious accident to a private aeroplane of French registration which occurred when the pilot was manoeuvring in the vicinity of a friend's house. The tail unit of the aircraft struck some high tension cables and was damaged, with the result that the machine fell to the ground completely out of control. The pilot and one passenger were seriously injured, and the other passenger was killed.

## UNITED KINGDOM CIVIL AVIATION VOTE, 1937-38

The amount provided in the 1937-38 Air Estimates for expenditure on civil aviation showed a large increase over the provision for any previous year. The net total, including provision made for purely civil purposes in certain Votes other than the Civil Aviation Vote, was £2,733,500, representing an increase of £1,821,000 compared with the corresponding figure for 1936-37.

This substantial increase arose directly from the following major developments:—the inauguration of the Empire Air Mail Scheme; extended and improved ground organisation for the Empire air routes; experimental overseas flights, including flights across the Atlantic; the purchase of Heston Airport; the extension of the air traffic control organisation in the United Kingdom in accordance with the recommendations of the "Maybury" Committee.

A total sum of £791,000 was provided for subsidies to regular air transport companies, compared with £403,000 in 1936-37. The increased provision was largely due to the cost of the introduction of the Empire Air Mail Scheme, but the total also included subsidy payments to Imperial Airways Ltd. for feeder services connecting Nairobi and Lusaka with the England-Africa service at Kisumu (£20,000), the service to West Africa, which connects with the main England-South Africa route at Khartoum (£25,000), the provisional service between Bangkok and Hong Kong (£15,000) and the Bermuda-New York service, which opened in June, 1937 (£18,000). Financial provision was also made for experimental flights across the North Atlantic, and for anticipated developments in connection with the proposed West Africa-South America and trans-Tasman services. A sum of £50,000 was provided for the subsidy payment to Imperial Airways Ltd., in respect of the European services, representing a reduction of £15,000 on the figure for 1936-37, in accordance with terms of the agreement with the Company, and £25,000 was provided to cover payments to British Airways Ltd. in respect of the London-Scandinavia service.

Approximately £700,000 was provided for improvements to the ground facilities on the Empire air routes. This sum included a further grant of £125,000 to the Government of Newfoundland towards the cost of the air base in that Dominion, and provision was also made for a contribution towards the cost of the proposed air base at Portsmouth, in accordance with the provisional arrangements with the municipal authority.

Following on the approval of the recommendations of the "Maybury" Committee, a sum of approximately £100,000 was provided in the Estimates, mainly as a first instalment towards the cost of giving effect to the recommendation that the necessary meteorological radio and control organisations in the United Kingdom should be provided at State expense.

As the result of the decision to acquire Heston Airport, together with a sufficient area of adjoining land for enlarging the airport, in order to prevent such land from being built over, provision was made for expenditure on this service, among other purchases.

The provision for subsidies to light aeroplane clubs was increased from £25,000 to £35,000 in order to allow further clubs to participate in the new subsidy scheme which came into operation at the beginning of the financial year. Financial assistance to the gliding movement remained unchanged at £5,000.

An item which appeared in the Civil Aviation Vote for the first time was a grant of £20,000 towards the expenses of the Air Registration Board, which was established under the Air Navigation Act, 1936, to perform certain functions hitherto exercised by the Air Ministry. These functions are mainly concerned with the control of airworthiness of civil aircraft.

Another new item was the provision of £19,000 for expenditure in connection with the creation of an extended meteorological organisation to serve



the Empire air routes. While this organisation as a whole is being provided on a co-operative basis by the meteorological departments in the Empire territories concerned, payments will be made from United Kingdom funds to particular governments (mainly Empire governments) for certain special services.

To cope with the increased volume of work falling upon the Department of Civil Aviation as a result of the general expansion of civil aviation activity, it became necessary during the year to enlarge and reorganise the staff of the Department, thereby increasing the financial provision on this account from £35,000 to £55,000.

The amounts provided under the various sub-heads are tabulated below :—

<i>Civil Aviation Vote (Vote 8).</i>		<i>Increase over 1936-37.</i>	
	£	£	
Salaries and wages .. .. .	103,000	46,000	
Supplies and transportation .. .. .	18,000	2,000	
Technical equipment, stores and experimental services	398,000	148,000	
Works, buildings and lands .. .. .	741,000	677,000	
Grants towards ground services for Empire air routes	357,000	282,000	
Subsidies and grants :—			
(a) Imperial Airways Ltd. and British Airways Ltd.	791,000	388,000	
(b) Light aeroplane clubs .. .. .	35,000	10,000	
(c) Gliding movement .. .. .	5,000	—	
(d) Air Registration Board .. .. .	20,000	20,000	
(e) Training of civil pilots .. .. .	1,000	1,000	
Miscellaneous services .. .. .	30,000	17,000	
Gross total of Vote 8 .. .. .	2,499,000	1,591,000	
<i>Provision made in other Votes for Civil Aviation Services.</i>			
Headquarters staff .. .. .	55,500	20,000	
Meteorological services .. .. .	44,000	24,000	
Grant towards meteorological services for Empire air routes.	19,000	19,000	
Experimental development of civil aircraft types ..	300,000	203,000	
Gross total. . . . .	2,917,500	1,857,000	
Contributions from Dominion and Colonial Governments towards Empire air services.	141,000	29,000	
Contributions from local authorities to- wards the maintenance of air route facilities.	2,000	—	
Estimated receipts from rentals, housing and landing fees, etc.	41,000	7,000	
	184,000	36,000	
Net total .. .. .	£2,733,500	£1,821,000	

## UNITED KINGDOM AIR TRANSPORT COMPANIES : DETAILS OF REGULAR SERVICES AND FLEETS

### SUBSIDISED COMPANIES

*Note.*—The services operated by British Airways Ltd., other than London-Paris and London-Lille, and the services operated by Imperial Airways Ltd. other than London-Budapest and certain services between London and Le Touquet, were operated under agreements providing for the payment of government subsidy.

#### British Airways Ltd.

*London-Amsterdam-Hamburg-Copenhagen-Malmö-Stockholm.*—Daily on weekdays. The Malmö-Stockholm section of the service was operated only between 19th April and 2nd October. The stop at Amsterdam was discontinued as from the latter date.

*London-Cologne-Hanover (-Berlin).*—Until 7th August, the London-Hanover section of the service was operated nightly (Sundays excepted). From 9th August, a service to Cologne, Hanover and Berlin on alternate nights, in conjunction with the German company Deutsche Lufthansa A-G, was operated in substitution.

*London-Paris.*—Twice daily (once on Sundays) until May. From 29th May, five services daily were operated from Monday to Friday, four on Saturdays and three on Sundays, with a further daily service from 1st July. In October, the frequency was reduced to four services daily from Monday to Friday, and three on Saturdays and Sundays.

*London-Lille.*—Once daily on weekdays until 8th March, when the service was suspended.

**Fleet.**—One D.H.84 ("Dragon"), one D.H.89 ("Dragon Rapide"), two Fokker F.VIII, one Fokker F.XII, three Junkers JU 52/3M, five Lockheed "Electra" and two Spartan "Cruiser."

#### Imperial Airways Ltd.

*London-Paris.*—Four times daily on weekdays (three times on Sundays) in summer, and three times daily (including Sundays) in winter. During the summer, one outgoing service on Fridays and Saturdays, and one incoming service on Mondays called at Le Touquet. Additional Sunday excursion and week-end services to Le Touquet were also operated.

*London-Basle-Zurich.*—Daily, except Sundays, during the summer, in conjunction with the Swiss company "Swissair."

*London-Brussels-Cologne.*—Daily on weekdays throughout the year, and a service on Sundays from 2nd May to 19th September, in conjunction with the Belgian company S.A.B.E.N.A.

*London-Budapest.*—A service over the route London-Cologne-Halle/Leipzig-Prague-Vienna-Budapest was operated daily on weekdays until 3rd April, a night stop being made at Cologne on the outward journey. From 5th April, the service was diverted to the route London-Brussels-Frankfort-Prague-Vienna-Budapest. It was suspended on 4th October.

*England-Australia.*—The twice-weekly service over this route operated by Imperial Airways Ltd., in conjunction with Indian Trans-Continental Airways Ltd. and Qantas Empire Airways Ltd., was continued throughout the year, the normal time taken for the complete journey from England to Australia (Brisbane) being approximately 12 days. On 5th March, Southampton was substituted for Croydon as the English terminal airport, and the service was operated with "Empire" flying boats as far as Alexandria. From 3rd October, one return flight per week was operated by "Empire" flying boats as far as Karachi. Details of the stopping-places on the England-Australia route are given opposite.



**Stopping places on the  
ENGLAND-AUSTRALIA ROUTE  
during 1937**

Stopping places in Roman type denote landplane route : stopping places  
in italics denote flying boat route

January to 5th March*	5th March to 5th October	From 5th October
London (Croydon)	<i>Southampton</i>	<i>Southampton</i>
Paris	<i>Macon</i>	<i>Macon (or St.Nazaire)</i>
Brindisi	<i>Marseilles</i>	<i>Marseilles</i>
	<i>Rome (Lake Bracciano)</i>	<i>Rome (Lake Bracciano)</i>
	<i>Brindisi</i>	<i>Brindisi</i>
		<i>Athens</i>
		<i>Mirabella</i>
		<i>Alexandria</i>
<i>Athens</i>		
<i>Mirabella</i>		
<i>Alexandria</i>		
<i>Cairo†</i>	<i>Tiberias</i>	<i>Alexandria</i>
<i>Gaza</i>	<i>Habbaniyeh</i>	<i>Port Said</i>
<i>Rutbah</i>	<i>Basra</i>	<i>Gaza</i>
<i>Baghdad</i>	<i>Bahrein</i>	<i>Rutbah</i>
<i>Basra</i>	<i>Dabai</i>	<i>Baghdad</i>
<i>Koweit</i>	<i>Gwadar</i>	<i>Basra</i>
<i>Bahrein</i>	<i>Karachi</i>	<i>Koweit</i>
<i>Sharjah</i>		<i>Bahrein</i>
<i>Gwadar</i>		<i>Sharjah</i>
		<i>Gwadar</i>
	<i>Karachi</i>	
	<i>Jodhpur</i>	
	<i>Delhi</i>	
	<i>Cawnpore</i>	
	<i>Allahabad</i>	
	<i>Calcutta</i>	
	<i>Akyab</i>	
	<i>Rangoon</i>	
	<i>Bangkok</i>	
	<i>Penang</i>	
	<i>Singapore</i>	
	<i>Port Darwin</i>	} see under " Qantas Empire Airways Ltd.", on p. 87.
	<i>Brisbane</i>	

Note.—" Optional " calls on all sections of the route have been included.

\* From 8th February outward services to Alexandria were operated by flying boats from Southampton over the route shown for subsequent periods.

† To 30th March only.





*Malaya-Hong Kong.*—A service providing a connection between the England-Australia route and Hong Kong was operated once weekly throughout the year. Until 19th December, this service was operated from Penang *via* Saigon and Tourane, a distance of 1,560 miles, but from that date the connection with the main route was made at Bangkok, the service operating along the route Bangkok-Hanoi-Fort Bayard-Hong Kong. This change of route enabled a saving of about 1,000 miles to be effected in the journey between London and Hong Kong, and reduced the scheduled time from  $9\frac{1}{2}$  to  $8\frac{1}{2}$  days approximately.

*England-South Africa.*—The twice-weekly service between England and South Africa was continued throughout the year. From 5th March the England-Alexandria section of the route was operated by "Empire" flying boats, and from 14th May these aircraft were also brought into use as far as Kisumu. The substitution of flying boats for landplanes on the main route was completed on 2nd June, when the flying boat service was extended to Durban, and the landplane service to Johannesburg was withdrawn. The use of flying boats for the complete journey from England to South Africa resulted in a reduction of the time taken from 8 to  $6\frac{1}{2}$  days. Early in July a third weekly flying boat service between Southampton and Kisumu was instituted. Details of the stopping places on the England-South Africa route are given opposite.

Auxiliary landplane services connecting with places on the main route, as provided for in the Empire Air Mail Scheme, were inaugurated as follows:—

*Beira-Salisbury-Blantyre-Lusaka.*—Twice weekly, from 30th June. (Operated through the medium of Rhodesian and Nyasaland Airways Ltd.).

*Kisumu-Nairobi.*—Twice weekly, from 1st July. (Operated through the medium of Wilson Airways Ltd.).

*Kisumu-Lusaka.*—Once weekly, from 7th July. (Operated by Wilson Airways Ltd.).

*Khartoum-West Africa.*—The weekly service between Khartoum and Lagos was continued throughout the year. Intermediate stops were made at El Obeid, El Fasher, Geneina, Abesher (February onwards), Fort Lamy, Maiduguri, Kano, Kaduna, Minna and Oshogbo. On 11th October a twice-weekly service between Lagos and Accra was inaugurated by Elders Colonial Airways Ltd., an associated company of Imperial Airways Ltd. This extension enabled surcharged mail to be conveyed between the United Kingdom and the Gold Coast in 6 days, compared with 9-14 days previously.

*Bermuda-New York.*—Operated in conjunction with Pan American Airways with one flight weekly in each direction by each company from 16th June. The frequency was increased to two return flights per week by each company for three months, commencing 30th August.

In view of unfavourable winter conditions at Port Washington, New York, the United States terminal was transferred in November to Baltimore, for the winter season.

**Fleet.**—For details of the fleet of Imperial Airways Ltd., *see* table on pages 74-75.

**Flying Personnel.**—The company's flying personnel, as at 31st December, 1937, comprised 64 Captains, 133 First Officers and Probationers, 24 Flight Engineers and 90 Flight Radio Operators.

#### UNSUBSIDISED COMPANIES

##### Air Dispatch Ltd.

*Croydon-Paris.*—Once daily on weekdays.

*Croydon-Le Touquet.*—Thrice weekly from 25th March to the end of that month, and once daily from 14th May until the end of September.

**Fleet.**—Twelve D.H.84 ("Dragon"), one "Dragon Rapide" and two D.H. 80A "Puss Moth."

# **FLEET OF IMPERIAL AIRWAYS LTD.**

(Details as at 31st December, 1937)

No. of Aircraft.	Make and Type.	All-up Weight. (lb.).	Avail-able Pay-load per Aircraft. (lb.).	Total avail-able Pay-load. (lb.).	Opera-tional Cruis-ing Speed. (m.p.h.).	Engines.				
						No.	Make and Type.	H.P.	Total h.p. per Aircraft.	
<i>Employed on Regular Services.</i>										
7	Armstrong Whitworth XV ("Atalanta " Class).	21,000	3,147	22,029	120	4	Armstrong Siddeley " Serval III."	340	1,360	9,520
5	Handley Page 42 (" Hannibal " Class).	30,000	6,552	32,760	105	4	Bristol " Jupiter XIF " "	490	1,960	9,800
2	Handley Page 42 (" Hercules " Class).	30,000	5,957	11,914	105	4	Bristol " Jupiter XFBM " "	555	2,220	4,440
1	Short " Scylla " "	33,500	6,013	6,013	105	4	Bristol " Jupiter XFBM " "	555	2,220	2,220
1	Short " Syrinx " "	33,500	6,013	6,013	105	4	Bristol " Pegasus XC " "	740	2,960	2,960
1	Short " Scipio " (flying boat)	32,500	6,560	6,560	105	4	Bristol " Jupiter XFBM " "	555	2,220	2,220
11	De Havilland D.H.86 ("Diana" Class).	10,250	1,848	20,328	145	4	De Havilland " Gipsy VI " "	185	740	8,140
22	Short " Empire " flying boat (" C " Class).	40,500	6,600	145,200	150	4	Bristol " Pegasus XC " "	740	2,960	65,120
50				250,817						104,420



*In Reserve, for Special Charter, etc.*

1	Short " Mayo Composite " comprising :— Lower Component " Maia " Upper Component " Mer-cury."	27,000 20,500	— 1,000	— 1,000	165 180	4 4	Bristol " Pegasus X " Napier " Rapier V "	830 315	3,320 1,260
1	Westland " Wessex "	6,000	900	900	95	3	Armstrong Siddeley " Genet Major."	140	420
1	Avro X (" Achilles ")	10,225	2,365	2,365	95	3	Armstrong Siddeley " Lynx IV C."	215	645
1	Avro 652 (" Avalon ")	7,400	974	974	145	2	Armstrong Siddeley " Chee-tah V."	270	540
5				5,239					6,185

### Allied Airways (Gandar Dower) Ltd.

*Thurso-South Ronaldshay (on request)-Howe (for Kirkwall and Stromness).*—Once daily, excepting Sundays, until the end of March. From April to 30th September, the service was operated twice daily on weekdays. It was then operated once daily, including Sundays; in December, the Sunday service was suspended.

*Aberdeen-Thurso-South Ronaldshay (on request)-Howe (for Kirkwall and Stromness)-Lerwick.*—Until 12th April, a twice-weekly service was operated from Thurso to South Ronaldshay (on request), Kirkwall and Lerwick. On 12th April, the service was extended southward to Aberdeen and was operated once on weekdays until 30th September. The portion between Thurso and Aberdeen was then suspended and the remainder of the service was operated twice weekly. In November, the service was again extended to Aberdeen, and from 23rd November, the frequency was increased to thrice weekly.

*Inverness-Thurso-South Ronaldshay (on request)-Howe (for Kirkwall and Stromness).*—Once daily, excepting Sundays, from July to 30th September. It was re-opened on 8th November and was operated thrice weekly until December, when it was reduced to twice weekly.

*Newcastle-Stavanger.*—Daily, Wednesdays and Sundays excepted, from 12th July to 30th September.

**Fleet.**—Four D.H. 84 ("Dragon"), one D.H. 86B ("Express Air Liner") and one Short "Scion."

### Blackpool and West Coast Air Services Ltd.

The following services were operated in conjunction with the Irish company, Aer Lingus Teoranta :—

*Croydon-Bristol-Dublin.*—Once daily on weekdays, until 19th April, when an extra service was introduced on weekdays stopping on request at Bristol, which was made a regular call in May. An additional daily service was operated from 1st to 22nd August. In September, the service was operated twice daily (once on Sundays). From October, the service *via* Bristol was operated once only on weekdays, but a direct service between Croydon and Dublin, operating once daily on weekdays, was instituted.

*Liverpool-Dublin.*—Once daily on weekdays until the end of January.

*Isle of Man-Dublin.*—Twice weekly until the end of January.

*Liverpool-Isle of Man-Dublin.*—Twice daily on weekdays, from 14th May. This was increased to thrice daily from June to 22nd August, when the original frequency was resumed until 5th September.

In addition, Blackpool and West Coast Air Services Ltd., operated the following services until 26th September, when they were taken over by Isle of Man Air Services Ltd. :—

*Liverpool-Isle of Man.*—Once daily on weekdays.

*Belfast-Isle of Man.*—Thrice weekly until the end of January. It was re-opened on 24th May and was operated once on weekdays until 11th July, after which it was operated twice daily on weekdays. In August, one service daily (except Sundays) was extended to Liverpool.

*Liverpool-Blackpool-Isle of Man.*—Twice daily (once on Sundays) until 13th May, when it was operated once daily on weekdays, with two additional services on Saturdays and Sundays. The service was curtailed to twice daily on Saturdays and Sundays during August and September.

*Manchester-Liverpool-Blackpool-Isle of Man.*—Twice daily on weekdays, from 14th May.

**Fleet.**—Two D.H. 83 ("Fox Moth"), one D.H. 84 ("Dragon"), one D.H. 86B ("Express Air Liner") and two D.H. 89 ("Dragon Rapide").



**Channel Air Ferries Ltd.**

*Brighton-Bembridge-Bournemouth.*—Twice daily (except Tuesdays), from 1st July.

*Croydon-Deauville.*—Opened on 3rd July and operated at week-ends only until August. During August, it was operated twice daily on weekdays and once on Sundays, and during September, on request.

*Brighton-Deauville.*—Once daily during August, and on request during September.

*Penzance (Land's End Aerodrome)-Scilly Islands.*—Once daily on week-days, from 15th September.

**Fleet.**—Two D.H. 89 ("Dragon Rapide").

**Highland Airways Ltd.**

*Inverness-Wick-Kirkwall.*—Once daily on weekdays.

*Kirkwall-Lerwick.*—Thrice weekly until 14th May. The service was re-opened at the beginning of October, and operated with the same frequency.

*Aberdeen-Inverness-Wick-Kirkwall-Lerwick.*—Operated once daily on week-days, from 17th May to 30th September.

*Kirkwall-Wick.*—Operated twice daily on demand from 17th to 31st May.

A service to the outer Isles of Orkney, starting from Kirkwall and calling on request at the islands of Stronsay, Sanday, Westray, North Ronaldshay and Longhope, and returning to Kirkwall, was operated thrice weekly until 19th June; thereafter it was operated daily until the end of September, when the thrice-weekly service was reverted to.

**Fleet.**—One D.H. 60G ("Moth"), two D.H. 84 ("Dragon") and two D.H. 89 ("Dragon Rapide").

**International Air Freight Ltd.**

On 29th September, this company inaugurated a twice-daily service, carrying freight only, between Croydon and Amsterdam.

**Fleet.**—Four Curtiss Wright T.32 ("Condor").

**Isle of Man Air Services Ltd.**

On 27th September, 1937, this company commenced operation of the services previously carried on by the Manx Airway Section of Railway Air Services Ltd., and certain services of Blackpool and West Coast Air Services Ltd., as follows:—

*Manchester-Liverpool-Blackpool-Isle of Man-Belfast-Glasgow.*—Once on Sundays.

*Manchester-Liverpool-Blackpool-Isle of Man.*—Twice daily on weekdays.

*Manchester-Liverpool.*—Once daily on weekdays.

*Liverpool-Isle of Man-Belfast.*—Once daily on weekdays.

**Fleet.**—Two D.H. 86B ("Express Air Liner"), one D.H. 84 ("Dragon") and five D.H. 89 ("Dragon Rapide").

**Jersey Airways Ltd.**

*Heston-Jersey.*—Once daily until May, when an additional service on Fridays and Saturdays was introduced. In June, an extra service on week-days and two extra services on Sundays were added. On 27th September, the frequency was reduced to once daily.

*Southampton-Jersey.*—Until May, the service was operated daily (until 23rd March, a call, on request, was made at Alderney on Mondays, Wednesdays and Fridays). During May, an additional service on Mondays, Fridays and

Saturdays was introduced. From June to 26th September, the service was operated as follows :—

Saturdays ..	9	services to 26th June.
	10	„ from 3rd July to 14th August.
	9	„ 21st and 28th August.
	8	„ thereafter.
Sundays ..	6	„ to 27th June.
	7	„ from 4th July.
Mondays ..	7	„ to 28th June.
	8	„ thereafter.
Tuesdays and Thursdays.	4	„ during the entire period from 1st June to 26th September.
Wednesdays	3	„ with additional service on 28th July and 4th August.
Fridays ..	8	„ to 13th August.
	7	„ 20th and 27th August.
	6	„ thereafter.

From 27th September the service was operated twice daily on weekdays and once on Sundays.

*Jersey—Alderney.*—From the beginning of May, a once-daily service was operated on Fridays and Mondays. From June to 11th September, the service was increased to once daily on weekdays, and between 13th and 25th September it was operated thrice weekly. From 27th September, the service was reduced to twice weekly.

*Brighton—Jersey.*—Daily, except on Wednesdays and Thursdays, from 31st May to 2nd October, with an increase to twice daily on Saturdays and Sundays until 29th June, and thereafter to twice daily except on Wednesdays and Thursdays.

*Exeter—Jersey.*—Once daily on Fridays, Mondays and Tuesdays, and twice daily on Saturdays, from 31st May until 29th June. Twice daily on Fridays, Saturdays, Mondays and Tuesdays from 2nd July to 11th September, and from 13th September to 2nd October, once daily on Mondays and Tuesdays, and twice daily on Saturdays and Sundays.

**Fleet.**—Six D.H. 86 ("Express Air Liner") and one D.H. 89 ("Dragon Rapide").

#### **Lundy and Atlantic Coasts Air Lines Ltd.**

*Barnstaple—Cardiff.*—Once daily until March.

*Barnstaple—Lundy Island.*—Twice daily until 30th September, after which it was operated twice daily on request only.

**Fleet.**—Two D.H. 60 ("Moth"), one Monospar "S.T.4" and one Short "Scion."

#### **North Eastern Airways Ltd.**

*Croydon—Doncaster—Yeadon—Newcastle—Perth—Aberdeen.*—Until 4th April, a thrice-weekly service was operated from Croydon to Doncaster (on request), Yeadon, Newcastle and Perth. From 5th April, a twice-daily service from Croydon—Doncaster—Newcastle (on request)—Perth (once daily only)—Aberdeen was substituted. In addition, a service between Doncaster and Yeadon was operated on demand. In July, the service between Croydon and Aberdeen was reduced to once daily and was operated *via* Doncaster, Yeadon (on request), York (on request), Newcastle (on request) and Perth. In October, the call on request at York was omitted, Newcastle became a regular stop, Edinburgh (on request) was substituted for Perth, and the portion of the service northwards to Aberdeen was suspended. From November, a call at York on request was made.

On 1st July, the following services were inaugurated :—

*Grimsby—Hull—Doncaster—Manchester.*—Twice daily on weekdays. From September, this service was extended to Liverpool, and was operated once daily on weekdays.



*Grimsby-Hull-Doncaster*.—Once daily on weekdays.

*Grimsby-Hull*.—Once daily on weekdays until September, when it was operated four times daily on weekdays.

*Doncaster-Manchester*.—Once daily on weekdays.

*Croydon-Knocke-Le Zoute*.—Once daily on weekdays (twice on Sundays) between 29th July and 6th September.

**Fleet**.—Two Airspeed "Envoy," four Airspeed "Courier," one Avro "Tutor" 621, one D.H. 60G ("Moth") and three D.H. 89 ("Dragon Rapide").

### Northern Airways Ltd.

*Glasgow-Campbeltown-Islay*.—Once daily on weekdays until May, when the frequency was increased to twice daily on weekdays, and during July, August and September, additional services between Glasgow and Islay were introduced. From November, the original service was reverted to.

*Glasgow-Campbeltown (on request)-Belfast-Isle of Man-Liverpool*.—Operated twice daily (once on Sundays) until 19th May.

*Glasgow-Isle of Man*.—Commenced on 20th May, and operated twice daily with an additional service on Saturdays. During July and August, the frequency was increased to thrice daily on weekdays and twice on Sundays, with additional services on Fridays, Saturdays and Mondays. From 1st September, the service was operated twice daily on weekdays until the end of the month, when it was suspended.

During the year, various services over the circular route Glasgow-Skye-Harris-North Uist-Benbecula-South Uist-Barra-Glasgow, were operated.

**Fleet**.—Three D.H. 84 ("Dragon") and five Spartan "Cruiser."

### Portsmouth, Southsea and Isle of Wight Aviation Ltd.

*Portsmouth-Ryde*.—This service was commenced on 22nd March and was operated with the following frequencies :—

March-April : Twelve daily (fourteen on Fridays and Saturdays).

May-June : Fifteen daily (fourteen on Sundays, seventeen on Fridays and Saturdays).

4th July-25th July : Twenty-five on weekdays (twenty-four on Sundays).

26th July-14th August : Twenty-four on weekdays (twenty-three on Sundays).

15th August-12th September : Twenty-two on weekdays (twenty-one on Sundays).

13th September-30th September : Twenty-one on weekdays (twenty on Sundays).

1st October-2nd November : Nine on weekdays (eight on Sundays).

From 3rd November : Eight on weekdays (seven on Sundays).

*Ryde-Bournemouth*.—A service was operated from 10th May to 12th September with the following frequencies :—

10th May-31st May : Five times daily.

1st June-3rd July : Four times daily, with an additional service on Saturdays.

4th July-12th September : Six times daily.

*Southampton-Ryde*.—Six times daily from 10th May to the end of August, and five times daily during September.

**Fleet**.—Five Airspeed "Courier," one D.H. 83 ("Fox Moth"), one Monospar "S.T.10" and two Monospar "S.T.25."

### Railway Air Services Ltd.

*Croydon-Birmingham-Stoke (on request)-Liverpool-Belfast-Glasgow.*—This service was operated once daily on weekdays until 9th May, when an additional service on weekdays, calling also at the Isle of Man, was introduced; from 4th July, a service on Sundays from Liverpool to the Isle of Man, Belfast and Glasgow was operated. The additional services were withdrawn after 4th September, the route then being operated once daily on weekdays.

*Belfast-Glasgow.*—Once daily on weekdays until 3rd July, after which it was operated twice daily.

The following additional summer services were operated from 10th May to 25th September, unless otherwise stated :—

*Liverpool-Birmingham-Gloucester/Cheltenham-Bristol-Southampton-Ryde-Brighton.*—Once daily on weekdays until 31st May, when an additional service on Mondays, Tuesdays, Fridays and Saturdays was introduced. From 11th September, the service was operated once daily on weekdays.

*Bristol-Cardiff-Plymouth.*—Once daily on weekdays, with an extra weekday service between Bristol and Cardiff. From June, a stop was made at Exeter on request.

*Brighton-Ryde.*—This service was operated twice daily on weekdays, with an extra service on Saturdays until 4th July, after which it was operated three times on weekdays and twice on Sundays.

*Ryde-Southampton-Bristol-Cardiff.*—Once on Sundays from 4th July to 12th September.

*Isle of Man-Glasgow.*—Twice daily, with an extra service on Saturdays and Sundays from 3rd July to 5th September.

*Isle of Man-Carlisle.*—Once daily on weekdays only until 7th June, when a Sunday service was added.

*Isle of Man-Belfast.*—Twice daily on weekdays, once on Sundays until 3rd July, when it was operated twice daily.

In addition to the above, a number of services were operated under the title of "The Manx Airways" by Railway Air Services Ltd. in conjunction with the Isle of Man Steam Packet Co. Ltd. The original "Manx Airway," Manchester-Liverpool-Blackpool-Isle of Man, was continued, being operated twice daily on weekdays and once on Sundays until 24th March, when an extra daily service was added. The following services were also operated during the summer months, commencing on 10th May :—

Yeadon-Manchester-Liverpool-Isle-of-Man.

Yeadon-Manchester-Blackpool-Isle of Man.

Manchester-Blackpool-Isle of Man.

Manchester-Liverpool-Isle of Man (suspended on 6th September).

Liverpool-Blackpool-Isle of Man.

Yeadon-Manchester (operated until 6th September as an extension of the Manchester-Liverpool-Blackpool-Isle of Man service).

**Fleet.**—The Manx Airways were taken over by Isle of Man Air Services Ltd. on 26th September. Up to that date the fleet of Railway Air Services Ltd. comprised two D.H. 84 ("Dragon"), three D.H. 86 ("Express Air Liner") and eight D.H. 89 ("Dragon Rapide").

### Utility Airways Ltd.

*Hooton-Liverpool.*—Four times daily from 14th May until the end of June, except on Tuesdays. The service was then operated on request only until 1st October, when it was suspended.

*Hooton-Liverpool (on request)-Blackpool.*—This service was commenced in July and operated daily until August, after which it was operated on request only. It was suspended on 1st October.

**Fleet.**—One Monospar "S.T. 25" and one D.H. 83 ("Fox Moth").



### Western Airways Ltd.

*Cardiff-Weston-super-Mare*.—Operated five times daily until the end of March. From April, it was operated thirteen times daily. After 30th September, it was operated six times daily.

*Birmingham-Weston-super-Mare*.—Commenced in August, and operated at week-ends until it was suspended on 12th September.

*Cardiff-Weston-super-Mare-Le Touquet-Paris*.—Operated at week-ends, from July to September.

**Fleet.**—Two D.H. 80A ("Puss Moth"), four D.H. 84 ("Dragon") and two D.H. 89 ("Dragon Rapide").

### Wrightways Ltd.

This company operated a service from Croydon to Paris twice on weekdays throughout the year.

**Fleet.**—One D.H. 80A ("Puss Moth"), one D.H. 84 ("Dragon"), one D.H. 86 ("Express Air Liner") and two D.H. 89 ("Dragon Rapide").

### RÉSUMÉ OF CIVIL AVIATION ACTIVITIES IN BRITISH EMPIRE COUNTRIES OTHER THAN THE UNITED KINGDOM

*Note.*—In the section dealing with each territory, full details are given of the services operated and fleets employed by any locally registered air transport companies. In addition, mention is made under the subheading "Empire Service" or "Other Services," as appropriate, of regular services operated by other companies, British or foreign, on which stops are made within the territory under review.

#### CANADA

##### Finance.

	1936-37.	1937-38.
Total Civil Aviation Vote .. ..	\$1,609,200 (£330,703)	\$2,899,272.75 (£595,823)
Post Office Vote for carriage of mail by air.	\$314,500 (£64,632)	\$705,000 (£144,883)

**Regular Air Services.**—The only Canadian air services which can be regarded as regular services are those which carry mail under contract with the Post Office Department, in addition to passengers and freight. These services are listed below. In northern Canada, a great deal of commercial flying is carried out in addition to such services, but while in many cases established routes are followed, the frequency is not at all definite.

##### *Arrow Airways Ltd.*

The Pas-Cumberland : Weekly.

The Pas-Herb Lake : Twice weekly.

*Fleet.*—One Fairchild F.C.2W2, one Fokker "Universal," one Waco UKC and one Waco YKC-S.

##### *British Yukon Navigation Co. Ltd.*

White Horse-Dawson : Weekly.

Prince Albert-Stony Rapids : Weekly.

*Fleet.*—Two Fairchild 82A.

##### *Canadian Airways Ltd.*

Central Manitoba and North Ontario Mining Areas-Kenora-Red Lake : Daily.

Sioux Lookout-Casummit Lake : Twice weekly.

Sioux Lookout-Red Lake : Daily.

Winnipeg-Diana : Daily.

God's Lake-Cross Lake-Norway House : Twice weekly.

Kenora-Golden Arm-Cole : Daily.

Kenora-Whitefish Bay : Weekly.

Fort Chipewyan-Goldfields : Weekly.

Fort McMurray-Fort Smith : Weekly.

Fort Smith-Fort Resolution : Weekly.

Fort Resolution-Fort Norman : Monthly.

Fort Norman-Aklavik : Monthly, except during break-up of ice.

Fort Resolution-Cameron Bay : Weekly.

Cameron Bay-Coppermine : Four times per year.

Goldfields-Fond du Lac : Weekly.

Moncton-Charlottetown : Daily.

Charlottetown-Magdalen Islands : Weekly, during the winter only.

Quebec-Rimouski : Weekly.

Rimouski-Sept Iles : Thrice weekly.

Sept Iles-Natashquan : Twice weekly.

Havre St. Pierre-Port Menier : Twice monthly.

Rimouski-Baie Comeau : Daily.

Prince Albert-Ile à la Crosse-Lac la Ronge : Weekly.

Vancouver-Seattle : Daily.



*Fleet.*—One Bellanca C.H.300, two Bellanca "Pacemaker," one D.H. 83 ("Fox Moth"), two D.H. 84 ("Dragon"), three D.H. 89 ("Dragon Rapide"), two Fairchild F.C.2W2, four Fairchild 71, one Fairchild "Super 71," one Fairchild 82A, one Fairchild 82B, one Junkers JU.52, one Junkers W.33, five Junkers W.34, two Laird L.C.B.200, one Lockheed "Electra," one Norseman Mk. III, two Norseman Mk. IV, one Stearman C-3B, one Stinson "Reliant" and two Stinson SR-8CM.

*Canadian Colonial Airways Ltd.*

Ottawa-Montreal : Daily.

Montreal-Albany : Daily.

*Fleet.*—One Stinson SR-8C and one Vultee VIA.

*M. & C. Aviation Company Ltd.*

Ile à la Crosse-La Roche : Daily.

*Fleet.*—Two Fairchild FC.2, one Stinson SM-2AA, one Waco YKS-6 and one Waco ZKS-6.

*Murray Aeronautical Corporation Ltd.*

Leamington-Pelee Island : Daily.

*Fleet.*—Two Fokker "Super Universal" and one Ford 4AT.

*Northern Airways Ltd.*

Atlin-Telegraph Creek : Ten trips per season.

*Fleet.*—Two Fokker "Super Universal" and one Ford 4AT.

*United Air Transport.*

Edmonton-White Horse : Twice weekly.

Edmonton-Fort St. John : Weekly.

Prince George-Takla Landing : Weekly.

Prince George-Fort Grahame : Nine trips per year.

*Fleet.*—One Fairchild FC.2W2, two Fokker "Universal," one Norseman Mk. IV and two Waco ZQC-6.

*Starratt Airway & Transportation Ltd.*

Sioux Lookout-Central Patricia : Daily.

*Fleet.*—One Beechcraft C17R, one D.H. 60 ("Moth"), one Fairchild 71C, three Fairchild 82A, two Fokker "Super Universal," one Norseman Mk. II, one Norseman Mk. IV and one Travel Air A6000A.

*Wings Ltd.*

Winnipeg-God's Lake and Ilford : Twice weekly.

Winnipeg-Red Lake : Daily.

*Fleet.*—One Bellanca "Airbus," two Fairchild 71C, two Fairchild 82A, one Fokker "Super Universal," one Norseman Mk. IV and five Waco.

*Trans-Canada Air Lines.*—This company has been entrusted with the operation of the proposed service across Canada between the North Atlantic coast and the Pacific coast. On 1st September, under an agreement with Canadian Airways Ltd., Trans-Canada Air Lines took over the operation of the Vancouver-Seattle air mail service.

*Fleet.*—The company has purchased, or has on order, five Lockheed "Electra 10" and ten Lockheed "Electra 14."

**Light Aeroplane Clubs.**—The number of light aeroplane clubs in operation at the end of 1937 was 22, all of which were government-assisted. The total membership was 2,798, and 67 aeroplanes were in use. During the year, 20,943 hours were flown, and 258 private and 69 commercial pilots' licences were obtained.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 490 commercial and 114 private aircraft, 320 commercial pilots, 129 "limited commercial" pilots, 73 transport pilots, 635 private pilots and 595 ground engineers. There were 93 licensed aerodromes.

## COMMONWEALTH OF AUSTRALIA

Finance	1936-37.	1937-38.
Total Civil Aviation Vote .. ..	£ 480,920	£ 583,422
Direct Air Transport Subsidy .. ..	210,450	173,242

**Regular Air Services***Adastral Airways Ltd.**Subsidised Service.*

Sydney-Bega : Twice weekly. (*Note.*—The company actually operated this service six times weekly, but subsidy was payable in respect of two services weekly only.)

*Fleet.*—One B.A. "Eagle," one D.H. 83 ("Fox Moth"), one Klemm "Swallow" and one Waco YQS-6.

*Aircrafts Pty. Ltd.**Subsidised Service.*

Brisbane-Cracow : Weekly.

*Unsubsidised Services.*

\*Brisbane-Rockhampton-Monto-Brisbane (from February) : Round trip twice weekly.

\*Rockhampton-Mackay (from July) : Weekly.

\*Rockhampton-Theodore-Cracow (from August) : Weekly.

\*Brisbane-St. George (from August) : Weekly.

\*Brisbane-Murgon (from August) : Twice weekly.

\*Brisbane-Gayndah (from August) : Weekly.

\*Brisbane-Monto (from August) : Weekly.

\*Brisbane-Rockhampton-Monto-Brisbane (from 9th November) : Round trip once weekly.

\*Rockhampton-Cracow (from 9th November) : Weekly.

\*Brisbane-Murgon (from 9th November) : Twice weekly.

\*Brisbane-Gayndah (from 9th November) : Weekly.

\*Brisbane-Monto (from 9th November) : Weekly.

\*Brisbane-Bundaberg (from 9th November) : Weekly.

*Fleet.*—Two D.H. 84 ("Dragon").

*Airlines of Australia Ltd.**Subsidised Service.*

Rockhampton-Mount Coolon : Weekly.

*Unsubsidised Services.*

Brisbane-Townsville (up to 18th January) : Thrice weekly.

" " (19th January-April) : Four times weekly.

" " (during April) : Five times weekly.

" " (May-7th October) : Four times weekly.

" " (after 7th October) : Seven times weekly.

Townsville-Cairns (up to 18th January) : Four times weekly.

" " (19th January to 16th May) : Five times weekly.

" " (9th August to 7th October) : Six times weekly.

" " (from 8th October) : Eight times weekly.

Townsville-Cairns-Cooktown (17th May to 8th August) : Six times weekly.

Brisbane-Sydney (January to 29th August) : Twice on weekdays, once on Sundays.

Brisbane-Sydney (30th August to 28th November) : Once daily.

Brisbane-Sydney (from 29th November) : Twice on weekdays, once on Sundays.

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\* Services not carrying mail.



The following services were run in conjunction with Australian National Airways Pty. Ltd. :—

Adelaide-Melbourne-Sydney-Brisbane : Once daily on weekdays.

Adelaide-Melbourne (from 29th November) : Once daily on weekdays.

Melbourne-Sydney (January to 28th November) : Once daily on weekdays.

Melbourne-Sydney (from 29th November) : Twice daily on weekdays.

\*Townsville-Mt. Isa (25th February to 29th September) : Weekly.

*Fleet.*—Two Avro X, one D.H. 80A ("Puss Moth"), one D.H. 89 ("Dragon Rapide"), one Douglas D.C.3, three Monospar S.T.12 and two Stinson A.

*Airlines (W.A.) Ltd.*

*Subsidised Service.*

Perth-Calgoorlie : Weekly.

*Fleet.*—One Simmonds "Spartan" and one Stinson "Reliant" (S.R.7B).

*Ansett Airways Ltd.*

*Unsubsidised Services.*

Melbourne-Hamilton (January to 7th February) : Once daily on weekdays.

Melbourne-Hamilton (from 8th February) : Twice daily on weekdays.

Melbourne-Mildura-Broken Hill (from 27th September) : Once daily on weekdays.

Sydney-Narrandera-Melbourne (from 18th October) : Once daily on weekdays.

\*Adelaide-Mildura-Hay-Narrandera (from 29th November) : Once daily on weekdays.

*Fleet.*—One Airspeed "Envoy," one D.H. 60M, one Fokker "Universal," three Lockheed "Electra 10B" and one Porterfield 35/70.

*Australian National Airways Pty. Ltd.*

*Subsidised Services.*

Melbourne-Launceston-Hobart : Once daily on weekdays.

Launceston-Flinders Island : Once daily on weekdays.

Melbourne-King Island-Launceston : Thrice weekly.

Perth-Adelaide : Twice weekly.

*Unsubsidised Services.*

Launceston-Hobart (inaugurated in December) : Once daily on weekdays.

Perth-Adelaide : Weekly.

Melbourne-Canberra-Sydney (January to 1st August) : Once daily on weekdays.

Melbourne-Sydney (2nd August to 29th August) : Once daily on weekdays.

Adelaide-Melbourne-Sydney-Brisbane (30th August to 28th November) : Once daily on weekdays. (*Note.*—In conjunction with Airlines of Australia Ltd.)

Adelaide-Melbourne (from 29th November) : Once daily on weekdays.

Melbourne-Sydney (from 29th November) : Twice daily on weekdays.

Melbourne-Wagga-Sydney (January to 1st August) : Once daily on weekdays.

Melbourne-Wagga-Canberra-Sydney (from 2nd August) : Once daily on weekdays.

Adelaide-Renmark-Mildura-Broken Hill (January to 30th May) : Twice weekly.

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\* Services not carrying mail.

- Adelaide—Renmark—Broken Hill—Mildura—Melbourne (31st May to 29th August) : Thrice weekly.  
 Adelaide—Renmark—Broken Hill—Mildura—Melbourne (from 30th August) : Once daily on weekdays.  
 Adelaide—Broken Hill—Mildura—Adelaide : Weekly.  
 Adelaide—Mount Gambier—Melbourne (*via* Naracoorte, from 29th August) : Once daily on weekdays.  
 Adelaide—Cowell—Port Lincoln—Adelaide : Weekly.  
 Adelaide—Kangaroo Island : Once daily on weekdays.

*Fleet.*—One D.H. 60G, three D.H. 60M, one D.H. 83 ("Fox Moth"), three D.H. 84 ("Dragon"), two D.H. 86 ("Express Air Liner"), three D.H. 89 ("Dragon Rapide"), two D.H. 89A ("Dragon Rapide"), four Douglas D.C.2, one Douglas D.C.3, one Monospar S.T.25, one Percival "Gull" and one Short "Scion."

*Butler Air Transport Co.*

*Subsidised Service.*

Charleville—Cootamundra : Twice weekly.

*Fleet.*—Two D.H. 84 ("Dragon").

*Guinea Airways Ltd.* (See also under "New Guinea" on opposite page.)

*Unsubsidised Services.*

Adelaide—Daly Waters—Darwin (from 18th February) : Weekly.

Adelaide—Mildura—Hay—Cootamundra—Sydney (from 16th August) : Once daily on weekdays.

*Fleet.*—Three Lockheed "Electra 10A" and one Taifun B.F.108B were used for the above services.

*Intercity Airways Pty. Ltd.*

*Unsubsidised Service.*

Sydney—Ningam—Broken Hill : Twice weekly. (*Note.*—The Company was taken over by the Southern Airlines and Freighters Ltd. on 30th July.)

*Fleet.*—One Codock.

*MacRobertson-Miller Aviation Co. Ltd.*

*Subsidised Services.*

Perth—Daly Waters : Twice weekly.

Ord River—Wyndham : Weekly (twice weekly from April to September).

Adelaide—Whyalla : Weekly.

*Unsubsidised Service.*

Adelaide—Whyalla : Weekly.

*Fleet.*—One Cessna C-37, four D.H. 83 ("Fox Moth"), five D.H. 84 ("Dragon") and one Fokker "Universal."

*North Queensland Airways Pty. Ltd.*

*Subsidised Service.*

Normanton—Burketown (from 15th June) : Weekly.

*Unsubsidised Services.*

Cairns—Normanton : Weekly.

Cairns—Townsville : Thrice weekly (from 24th January, four times weekly).

Cairns—Cooktown : Four times weekly.

Brisbane—Cairns : Weekly (from October, twice weekly).

\*Cairns—Portland Roads (from 12th June) : Fortnightly.

*Fleet.*—One D.H. 60G ("Moth"), two D.H. 80A ("Puss Moth") and one D.H. 84 ("Dragon").

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\* Services not carrying mail.



*Qantas Empire Airways Ltd.**Subsidised Services.*

Singapore-Brisbane : Twice weekly. Operated as part of the England-Australia service. (See page 70.) Intermediate stops in Australia were made at Darwin, Daly Waters, Newcastle Waters, Brunette Downs, Camooweal, Mount Isa, Cloncurry, Winton, Longreach, Blackall, Charleville and Roma.

Cloncurry-Normanton : Weekly.

*Unsubsidised Services.*

\*Longreach-Charleville (from 11th February) : Twice weekly.

\*Longreach-Rockhampton (5th March to 13th July) : Weekly.

*Fleet.*—Four D.H. 83 ("Fox Moth"), five D.H. 86 ("Express Air Liner"), one D.H. 90 ("Dragonfly") and one Saro 17B.

*Southern Airlines and Freighters Ltd.**Unsubsidised Services.*

Sydney-Nyngan-Broken Hill : Twice weekly until 8th August, then once daily on weekdays. (See also Intercity Airways Ltd.)

Broken Hill-Mildura (9th August to 17th September) : Daily.

*Fleet.*—One D.H. 90 ("Dragonfly"), one L.J.W.7 ("Gannet") and one Waco YQC 6.

*Victorian and Interstate Airways Pty. Ltd.**Unsubsidised Service.*

Melbourne-Hay : Once daily on weekdays.

*Fleet.*—One D.H. 60G ("Moth"), one Desoutter and one Miles "Merlin."

*Empire Service.*—See under "Qantas Empire Airways Ltd." above.

**Light Aeroplane Clubs.**—At the end of 1937, there were seven government-assisted and four unassisted light aeroplane clubs. During that period, 22,328 hours were flown and 215 members obtained pilots' "A" licences.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were in Australia and New Guinea 303 registered civil aircraft, 867 private and 343 commercial pilots, and 446 ground engineers. In Australia only, there were 203 licensed aerodromes, in addition to 91 aerodromes and 160 emergency landing grounds maintained by the government.

**NEW GUINEA****Air Services**

*Guinea Airways Ltd.*—This company operated various services between the coast and the goldfields. Services were also operated in Australia (see opposite).

*Fleet.*—Two D.H. 60G ("Moth"), one D.H. 83 ("Fox Moth"), two Ford 4 ATE, two Ford 5 ATC, one Junkers F.13, two Junkers W.34, four Junkers G.31 and one Stinson "Reliant". In addition, one Taifun B.F.108B and three Lockheed "Electra 10A" were used for the services in Australia.

*Mandated Airlines Ltd.*—This company operated various services to and from the goldfields, including the following, which, as from 1st August, were operated under a contract with the Administration for the carriage of mails, official passengers and cargo :—

Salamanua-Wau.

Salamanua-Bulolo.

Salamanua-Otibanda.

Wau-Otibanda.

Salamanua and Wau-Port Moresby (Papua).

*Fleet.*—One Avro 642, one D.H. 60G ("Moth"), three D.H. 83 ("Fox Moth"), three D.H. 84 ("Dragon") and one Fokker F.VII.

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\* Services not carrying mail.

*Stephens Aviation Ltd. (formerly E. J. Stephens).*—Various services between the coast and the goldfields were operated by this company, including the following, which, as from 1st August, were operated under a contract with the Administration for the carriage of mails, official passengers and cargo :—

Madang—Upper Ramau.  
Madang—Chimbu.

*Fleet.*—Two D.H. 50A, one D.H. 60M (" Moth "), one D.H. 61, one D.H. 66 and one Waco 10.T.

**Aircraft, Personnel, etc.**—The registered aircraft and licensed pilots and ground engineers in New Guinea are included in the totals given under " Commonwealth of Australia." There were 19 licensed public aerodromes in New Guinea. In addition, 21 aerodromes and 6 emergency landing grounds are provided and maintained by the Administration.

## NEW ZEALAND

### Finance

	1936-37.	1937-38.
Total Civil Aviation Vote .. ..	£ 21,914	£ 42,040

### Regular Air Services

*Air Travel (New Zealand) Ltd.*

Hokitika—Okuru : Weekly.

Inchbonnie—Hokitika—Fox Glacier : Thrice weekly.

*Fleet.*—Two D.H. 83 (" Fox Moth ") and one D.H. 90A (" Dragonfly ").

*Cook Strait Airways Ltd.*

Wellington—Blenheim : Four times daily.

Wellington—Blenheim—Nelson : Daily.

Wellington—Nelson : Twice daily.

Nelson—Greymouth—Hokitika (inaugurated 23rd February) : Thrice weekly.

Wellington—Nelson—Hokitika (inaugurated 30th October) : Thrice weekly.

*Fleet.*—Four D.H. 89 (" Dragon Rapide ").

*East Coast Airways Ltd.*

Gisborne—Napier (1st January to 29th October) : Twice weekly.

Gisborne—Napier—Palmerston North (from 30th October) : Twice weekly.

*Fleet.*—Two D.H. 84 (" Dragon ").

*Union Airways of New Zealand Ltd.*

Palmerston North—Dunedin : Daily.

Wellington—Palmerston North—Auckland (inaugurated 26th June) : Daily.

Wellington—Palmerston North (from October) : Daily.

*Fleet.*—Three D.H. 86 (" Express Air Liner ") and three Lockheed " Electra 10A."

**Light Aeroplane Clubs.**—At the end of the year, there were 11 government-assisted and one unassisted light aeroplane clubs. On 31st December, these clubs had a total membership of 834, and 202 private and 16 commercial pilots' licences were obtained by members during the year.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 92 registered civil aircraft, 73 commercial and 477 private pilots, and 65 ground engineers. There were 50 " permanent " licensed public aerodromes and 7 temporary licensed aerodromes.



## UNION OF SOUTH AFRICA

		1936-37.	1937-38.
<b>Finance</b>		£	£
Total Civil Aviation Vote .. ..		52,925	37,040
Direct Air Transport Subsidy.. ..		34,000	20,000

**Regular Air Services***South African Airways*

- Johannesburg-Kimberley-Beaufort West-Cape Town (until 4th July) : Twice weekly.
- Johannesburg-Kimberley-Beaufort West-Cape Town (from 5th July) : Thrice weekly. (*Note.*—From 5th July to 6th October one service carried mail only.)
- Johannesburg-Durban (until 4th July) : Once daily on weekdays.
- Johannesburg-Durban (5th July to 9th October) : Once daily with an additional service on Thursdays carrying mail only.
- Johannesburg-Durban (10th October to December) : Once daily on weekdays.
- Johannesburg-Bloemfontein-Port Elizabeth : Weekly.
- Johannesburg - Bloemfontein - Kimberley - Upington - Keetmanshoop-Windhoek (January to June) : Weekly.
- Johannesburg - Bloemfontein - Kimberley - Upington - Keetmanshoop-Mariental-Windhoek (June to 4th July) : Weekly.
- Johannesburg - Kimberley - Upington - Keetmanshoop - Mariental - Windhoek (5th July to December) : Twice weekly.
- Cape Town-Port Elizabeth-East London-Durban (January to 5th July) : Twice weekly.
- Cape Town-Port Elizabeth-East London-Durban (6th July to December) : Thrice weekly. (*Note.*—Until 7th October one service carried mail only).
- Johannesburg-Broken Hill-Nairobi-Kisumu (from 4th July) : Weekly.
- Johannesburg-Lourenço Marques (from 14th July) : Twice weekly. (*Note.*—This service carried mail only).

*Fleet.*—Four Airspeed "Envoy," two Junkers F.13, nine Junkers JU.52/3m and three Junkers JU.86.

*Empire Service.*—A twice-weekly landplane service from England to Johannesburg (*see* page 73) was operated by Imperial Airways Ltd. until 1st June, with a stop, on request only, at Pietersburg. After 1st June, the service to South Africa was operated by "Empire" flying boats with Durban as the terminal. No other stop in South Africa was made on the flying boat service.

**Light Aeroplane Clubs.**—At the end of the year, there were 2 light aeroplane clubs in operation. In addition, 10 flying schools were actively engaged in training civil pilots. During the year, 27,529 hours were flown by the light aeroplane clubs and flying schools and 193 "A" pilots' licences were obtained.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 209 civil aircraft, 86 commercial pilots, 329 private pilots and 80 ground engineers. There were 73 licensed aerodromes.

	<b>EIRE</b>	1936-37.	1937-38.
<b>Finance</b>		£	£
Civil aviation and meteorological services		14,700	77,257
Construction of civil airports .. ..		30,000	278,050
Establishment of an air transport company		2,500	—
Total .. .. .		47,200	355,307

### Regular Air Services

*Aer Lingus Teoranta*.—The following services were operated in conjunction with Blackpool and West Coast Air Services Ltd. (now known as West Coast Air Services Ltd.):—

Croydon-Bristol-Dublin: Once daily on weekdays, until 19th April, when an extra service was introduced on weekdays stopping on request at Bristol, which was made a regular call in May. An additional daily service was operated from 1st to 22nd August. In September, the service was operated twice daily (once on Sundays). From October, the service *via* Bristol was operated once only on weekdays, but a direct service between Croydon and Dublin, operating once daily on weekdays, was instituted.

Liverpool-Dublin: Once daily on weekdays until the end of January.

Isle of Man-Dublin: Twice weekly until the end of January.

Liverpool-Isle of Man-Dublin: Twice daily on weekdays, from 14th May.

This was increased to thrice daily from June to 22nd August, when the original frequency was resumed until 5th September.

*Fleet*.—One D.H. 84 ("Dragon") and one D.H. 86B ("Express Air Liner").

**Light Aeroplane Clubs**.—At the end of 1937, only one light aeroplane club, the Dublin Flying Club, was in existence, the Irish Aero Club Ltd. having gone into voluntary liquidation at the end of November. The Dublin Flying Club had a total membership of 150; 900 hours were flown, and 3 members obtained pilots' licences during the year.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 13 registered civil aircraft, 25 private and 5 commercial pilots, and 11 ground engineers. There were 2 licensed aerodromes.

### INDIA

		1936-37.	1937-38.
		Rs.	Rs.
<b>Finance</b>			
Total Civil Aviation Vote	.. ..	23,80,000	25,04,000
		(£178,545)	(£187,847)
Works (Route Organisation)	.. ..	2,84,100	3,15,000
		(£21,313)	(£23,631)

(Note.—The 1937-38 figures do not include Burma.)

### Regular Air Services

*Air Service of India Ltd.*

Bombay-Bhavnagar-Rajkot-Jamnagar-Porbandar (1st November to 22nd November): Four times weekly.

Bombay-Bhavnagar-Rajkot-Jamnagar-Porbandar (from 23rd November): Thrice weekly.

*Fleet*.—Two Percival "Vega Gull."

*Indian National Airways Ltd.*

Karachi-Lahore: Twice weekly.

*Fleet*.—One Avro X, two D.H. 83 ("Fox Moth"), two D.H. 84 ("Dragon") one Percival "Gull" and one Percival "Vega Gull."

*Indian Trans-Continental Airways Ltd.*

Karachi-Singapore: Twice weekly. Operated in conjunction with Imperial Airways Ltd. as part of the England-Australia service (*see* page 70). Intermediate stops in India were made at Jodhpur, Delhi, Cawnpore, Allahabad and Calcutta.

*Fleet*.—Two Armstrong Whitworth "Atalanta."



*Tata Sons Ltd.*

Karachi-Madras : Twice weekly.

Bombay-Trivandrum (1st January to 19th April) : Weekly.

Bombay-Trivandrum (from 27th October) : Weekly.

(Note.—The service was suspended during the monsoon period.)

Bombay-Indore-Bhopal-Gwalior-Delhi (from 8th November) : Twice weekly.

*Fleet*.—Three D.H. 89 ("Dragon Rapide"), two Miles "Merlin," 3 Waco Y.Q.C.6 and 6 Waco "F.6 Freighter."

*Empire Service*.—See under "Indian Trans-Continental Airways Ltd." above.

**Light Aeroplane Clubs.**—At the end of 1937, there were 7 government-assisted and 2 unassisted light aeroplane clubs. The total membership at the end of the year was 1,632 : 75 members obtained "A" pilots' licences, 8 obtained "limited commercial" licences and 12 obtained "B" licences. Hours flown amounted to 11,671.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 147 registered civil aircraft, 69 commercial pilots, 8 "limited commercial" pilots, 236 private pilots and 106 ground engineers. There were 59 aerodromes open to public use and 23 where prior permission for use was necessary.

**CEYLON**

		1936-37.	1937-38.
<b>Finance</b>		Rs.	Rs.
Total Civil Aviation Vote	.. .. .	1,93,059 (£14,483)	52,370 (£3,929)

**Regular Air Services.**—There were no regular air services in or to Ceylon during 1937.

**Light Aeroplane Clubs.**—The Aero Club of Ceylon continued in operation throughout the year. There was a total membership of 221, and 70 hours were flown during the year.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 3 civil aircraft and 6 private pilots.

**BURMA**

**Finance.**—For the year 1937-38, a total sum of Rs. 3,94,410 (£59,588) was voted for civil aviation purposes.

**Regular Air Services***Irrawaddy Flotilla & Airways Ltd.*

Rangoon-Prome-Yenangyaung-Mandalay (January to July) : Weekly.

Rangoon-Prome-Yenangyaung (January to July) : Twice weekly.

Rangoon-Prome-Yenangyaung (July to November) : Thrice weekly.

Rangoon-Prome-Yenangyaung (from November) : Twice weekly.

Rangoon-Moulmein-Tavoy (from July) : Twice weekly.

Rangoon-Tavoy (August to October) : Thrice weekly.

Rangoon-Moulmein-Tavoy (from October) : Thrice weekly.

*Fleet*.—Two Short "Scion Senior."

*Empire Service*.—The main England-Australia service (see page 70) was operated twice weekly through Burma by Indian Trans-Continental Airways Ltd. (see under "India") in conjunction with Imperial Airways Ltd. Stops were made at Akyab and Rangoon.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 9 civil aircraft, 22 private pilots and 1 commercial pilot and 4 ground engineers. There were 1 licensed and 9 government-owned aerodromes, and 2 licensed seaplane airports.

**Light Aeroplane Clubs.**—At the end of 1937, there were no government-assisted light aeroplane clubs in Burma. There were, however, two unassisted clubs, the Burma Flying Club and the Rangoon Flying Syndicate. The former club had a membership of thirty, and members, having no aircraft of their own, made use of the flying facilities afforded by the Rangoon Flying Syndicate, all members of this Syndicate being also members of the Burma Flying Club. The Syndicate had two aircraft, and a total membership of 10. During the year, a total of 215 hours was flown. No pilots' licences were obtained during 1937 but all members of the Syndicate had obtained their licences prior to 1937.

### SOUTHERN RHODESIA

	1936-37.	1937-38.
<b>Finance</b>	£	£
Total Civil Aviation Vote .. .. .	16,024	18,551
Subsidy to Imperial Airways Ltd. .. .. .	10,000	8,000
Subsidy to Rhodesian & Nyasaland Airways Ltd.	1,000	7,500

#### Regular Air Services

*Rhodesian and Nyasaland Airways Ltd.*

Salisbury-Blantyre-Beira : Weekly.

Salisbury-Blantyre (January to August) : Weekly.

Salisbury-Umtali-Beira (January to July) : Weekly.

Salisbury-Beira (from July) : Twice weekly.

Beira-Salisbury-Bulawayo-Pietersburg-Johannesburg : Weekly. (Inaugurated on 1st July to connect at Beira with the flying boat service operated by Imperial Airways Ltd. from England to Durban.)

Beira-Salisbury-Bulawayo (from July) : Weekly.

Blantyre-Salisbury-Bulawayo (from 1st July ; suspended in December) : Weekly.

Beira-Salisbury-Lusaka (from 1st July) : Twice weekly.

**Fleet.**—Three D.H. 85 ("Leopard Moth"), three D.H. 89 ("Dragon Rapide") and one D.H. 90 ("Dragonfly").

**Empire Service.**—A twice-weekly landplane service from England to South Africa (see page 73) was operated by Imperial Airways Ltd. until 2nd June, with stops at Salisbury and Bulawayo. After 2nd June, the England-South Africa service was operated by "Empire" flying boats down the east coast of Africa, with no stops in Southern Rhodesia.

**Light Aeroplane Clubs.**—The Bulawayo Light Plane Club, the Salisbury Flying Club and the Shabani Light Plane Club were in operation during the year. Statistics relating to the clubs are given below.

	<i>Bulawayo Light Plane Club.</i>	<i>Salisbury Flying Club.</i>	<i>Shabani Light Plane Club.</i>
Total membership .. .. .	295	141	30
"A" licences gained in 1937 .. .. .	13	5	—
Hours flown in 1937 .. .. .	885	106	115

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 26 registered civil aircraft, 16 commercial pilots, 44 private pilots and 14 ground engineers. There were 3 licensed and 2 unlicensed customs aerodromes, 1 licensed and 23 unlicensed private landing grounds, and 43 unlicensed government-owned landing grounds.



## THE GAMBIA

	1936.	1937.
<b>Finance</b>	£	£
Air mail charges .. .. .	500	800
New radio equipment and installation expenses ..	900	170
Total Civil Aviation Vote .. .. .	1,400	970

**Regular Air Services.**—No regular British air services were operated in or to the Gambia during the year. Bathurst was used as a regular stopping place by the German air transport company, Deutsche Lufthansa, which operated a weekly air mail service between Europe and South America.

**Aerodromes.**—On 31st December, 1937, there were one government-owned customs seaplane alighting area, one private customs aerodrome and one government-owned customs landing ground.

## GOLD COAST

<b>Finance</b>	1936-37.	1937-38.
Expenditure on aerodromes .. .. .	£75,000	£41,000

**Regular Air Services**

*Empire Service.*—Elders Colonial Airways Ltd. (*see under "Nigeria"*), an associated company of Imperial Airways Ltd., inaugurated on 11th October a twice-weekly service from Accra to Lagos, which connected at the latter place with the weekly Khartoum–West Africa service (*see page 73*) operated by Imperial Airways Ltd.

*Other Services.*—On 1st March, the French air transport company, Aeromaritime, inaugurated a weekly service from Dakar to Douala (later extended to Pointe Noire) which called at Takoradi as a temporary measure until facilities were made available at Accra in October.

**Aerodromes.**—On 31st December, 1937, there were one government-owned customs aerodrome, two government-owned customs seaplane alighting areas and one government-owned customs landing ground.

## KENYA

<b>Finance</b>	1936.	1937.
Total Civil Aviation Vote .. .. .	£17,912	£17,730
Subsidy to Imperial Airways Ltd. .. .. .	15,000	15,000

**Regular Air Services**

*Wilson Airways Ltd.*

Dar-es-Salaam – Zanzibar – Tanga – Mombasa – Nairobi – Nyeri – Nakuru – Eldoret – Kitale – Kakamaga – Kisumu : Twice weekly. Operations over the Nairobi–Kisumu section were not commenced until July.

Dar-es-Salaam–Mafia–Kilwa–Lindi : Weekly, until June.

Dar-es-Salaam–Mafia : Operated from June as a charter service for the Tanganyika Government.

Nairobi – Lolgorien – Kitere – Kisumu – Musoma – Mwanza – Geita : Weekly. The call at Kitere was discontinued from April, and after June, the service was operated from Nairobi to Geita *via* Kisumu, Lolgorien, Musoma and Mwanza.

Kisumu–Nairobi – Moshi–Dodoma–Mbeya–Mpika–Broken Hill–Lusaka (from 30th June) : Weekly. (Twice weekly in December.) This service connects at Kisumu with the England–South Africa service operated by Imperial Airways Ltd. (*see below*).

Kisumu–Nairobi (from July) : Twice weekly.

*Fleet.*—Two D.H. 80A ("Puss Moth"), one D.H. 84 ("Dragon"), two D.H. 85 ("Leopard Moth"), two D.H. 89 ("Dragon Rapide"), one D.H. 90 ("Dragonfly"), one Klemm "Swallow" and two Percival "Vega Gull" aeroplanes.

*Empire Service.*—A twice-weekly landplane service from England to South Africa (see page 73) was operated by Imperial Airways Ltd. until 1st June, with stops at Kisumu and Nairobi. After 1st June the service was operated by "Empire" flying boats, with stops at Kisumu and Mombasa. From 29th June, an additional weekly service between England and Kisumu was inaugurated.

**Light Aeroplane Clubs.**—The Aero Club of East Africa continued in operation during the year; 863 hours were flown and 52 members held pilots' licences. At the end of the year there were 342 members.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 28 civil aircraft, 42 private and 14 commercial pilots, and 9 ground engineers. There were 31 government-controlled landing grounds and 3 customs aerodromes, 7 private licensed and 10 private unlicensed landing grounds.

## NIGERIA

	1936-37.	1937-38.
<b>Finance</b>	£	£
Total Civil Aviation Vote .. ..	112,402	47,921

### Regular Air Services

*Elders Colonial Airways Ltd.*—This company, an associated company of Imperial Airways Ltd., inaugurated on 11th October a twice-weekly service from Accra to Lagos, connecting at the latter place with the weekly Khartoum-West Africa service operated by Imperial Airways Ltd. (see below).

*Fleet.*—The D.H. 86 ("Express Air Liner") aeroplanes used by this company were supplied by Imperial Airways Ltd.

*Empire Service.*—A weekly service between Khartoum and Lagos (see page 73) was operated by Imperial Airways Ltd. throughout the year, connection being made at Khartoum with the main England-South Africa route. On this service, intermediate stops in Nigeria were made at Maiduguri, Kano, Kaduna, Minna and Oshogbo. An extension from Lagos to Accra (Gold Coast) was operated from 11th October by Elders Colonial Airways (see above).

*Other Services.*—The French air transport company, Aeromaritime, inaugurated a weekly air service between Dakar and Douala (later extended to Pointe Noire) which called at Lagos on request.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were no locally registered aircraft, licensed pilots or licensed ground engineers. There were six government-owned customs aerodromes, five government-owned customs seaplane alighting areas and seven government-owned landing grounds.

## NORTHERN RHODESIA

	1936	1937
<b>Finance</b>	£	£
Total Civil Aviation Vote .. ..	3,890	3,220
Subsidy to Imperial Airways Ltd. ..	2,000	2,000
Contribution to combined control of Civil Aviation in Northern and Southern Rhodesia.	—	800



**Regular Air Services**

*Empire Service.*—A twice-weekly landplane service from England to South Africa (see page 73) was operated by Imperial Airways Ltd. until 2nd June, with a stop at Broken Hill. After 2nd June, the England-South Africa service was operated by "Empire" flying boats down the east coast of Africa, with no stops in Northern Rhodesia.

*Other Services*

Rhodesian and Nyasaland Airways Ltd. (see under "Southern Rhodesia") operated services to Lusaka.

Wilson Airways Ltd. (see under "Kenya") operated services to Mpika, Broken Hill and Lusaka.

A French air transport company, Régie Air Afrique, maintained a fortnightly service from Madagascar to France via Broken Hill throughout the year.

**Light Aeroplane Clubs.**—The Flying Club of Northern Rhodesia continued in operation during the year, maintaining branches at Livingstone, Broken Hill, Lusaka, Ndola and Nkana. It had a total membership of 125; 157 hours were flown and 4 members obtained pilots' licences during the year.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 2 civil aircraft, 4 private and 2 commercial pilots and 3 ground engineers. There were 49 government aerodromes and landing grounds and 2 licensed private landing grounds.

**NYASALAND**

	1936.	1937.
<b>Finance</b>	£	£
Maintenance of aerodromes and landing grounds.	390	995

**Regular Air Services.**—Rhodesian and Nyasaland Airways Ltd. (see under "Southern Rhodesia") maintained services during the year to and from Blantyre.

**Light Aeroplane Clubs.**—The Nyasaland Aero Club continued in operation throughout the year. It had a total membership of 120, and 100 hours were flown and 3 pilots' licences were obtained during the year by its members.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 2 civil aircraft, 9 private pilots and 1 commercial pilot, and 2 ground engineers. There were 4 government aerodromes, 21 government-owned landing grounds, and 1 privately-owned landing ground.

**TANGANYIKA**

	1936.	1937.
<b>Finance</b>	£	£
Total Civil Aviation Vote .. ..	14,596	8,339
Subsidy to Imperial Airways Ltd. ..	10,000	—
Subsidy to Wilson Airways Ltd. ..	2,000	3,088

**Regular Air Services**

*Empire Service.*—A twice-weekly landplane service from England to South Africa (see page 73) was operated by Imperial Airways Ltd. until 1st June, with regular stops at Dodoma and Mbeya. Stops on request were also made at Arusha and Moshi. After 1st June, the service was operated by "Empire" flying boats, stops being made at Dar-es-Salaam and Lindi.

*Other Services*

Wilson Airways Ltd. (*see* under "Kenya") operated various services through Tanganyika with stops at Musoma, Mwanza, Geita, Moshi, Dodoma, Mbeya, Tanga, Dar-es-Salaam, Mafia, Kilwa and Lindi. The stops at Kilwa and Lindi were discontinued after June.

South African Airways (*see* under "Union of South Africa") operated services through Tanganyika, with stops at Mbeya, Dodoma and Moshi.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were 5 civil aircraft, 2 private pilots and 5 commercial pilots and 3 ground engineers. There were 2 seaplane alighting areas, 44 aerodromes, 8 private aerodromes and 7 emergency landing grounds.

**UGANDA**

	1936.	1937.
<b>Finance</b>	£	£
Expenditure on upkeep of aerodromes and landing ground.	500	24,225
Subsidy to Imperial Airways Ltd. . . . .	10,000	10,000

**Regular Air Services**

*Empire Service.*—A twice-weekly service from England to South Africa (*see* page 73) was operated by Imperial Airways Ltd. until 15th May, with a stop at Entebbe. After 15th May, the service was operated as far as Kisumu by "Empire" flying boats, with stops on request, from July, at Laropi, Butiaba and Port Bell. From September, Port Bell was made a regular stop. On 29th June, an additional weekly service from England to Kisumu was inaugurated.

**Aircraft, Personnel, etc.**—There were no locally registered civil aircraft in Uganda during 1937, and no licensed pilots or ground engineers. At the end of the year, there were 10 landing grounds and 4 seaplane alighting areas.

**ZANZIBAR**

	1936.	1937.
<b>Finance</b>	Rs.	Rs.
Aviation Control Expenses . . . . .	4,732 (£355)	13,330 (£1,000)

**Regular Air Services.**—Wilson Airways Ltd. (*see* under "Kenya") operated a twice-weekly service from Dar-es-Salaam to Nairobi, calling at Zanzibar.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were no locally registered civil aircraft, and no licensed pilots or ground engineers. There was one aerodrome and one emergency landing ground.

**PALESTINE**

	1936-37.	1937-38.
<b>Finance</b>	£	£
Total Civil Aviation Vote . . . . .	13,543	15,458
Extraordinary expenditure (Lydda and Haifa Airports).	80,000	84,000

**Regular Air Services**

*Palestine Airways Ltd.*—This company, which is a British company, inaugurated the following service on 11th August :—

Lydda-Haifa : Once on Fridays and twice on Sundays.

*Fleet.*—Two Short "Scion."



*Empire Service.*—The main England–Australia route (*see* page 70) was operated twice weekly through Palestine by Imperial Airways Ltd. Stops were made by landplanes at Gaza and by flying boats at Tiberias.

*Other Services.*—Services were operated between Alexandria and Haifa, with a stop at Lydda, between Cairo and Baghdad, with stops at Haifa and Lydda, and between Cairo and Nicosia (Cyprus), with a stop at Lydda, by Misr Airwork, S.A., an Egyptian company.

On the Amsterdam–Batavia route, operated by the Netherlands company, K.L.M., a stop was made at Lydda.

The Italian and the Polish air transport companies, Ala Littoria S.A. and “L.O.T.”, operated services from Europe to Haifa and Lydda respectively.

**Aircraft, Personnel, etc.**—On 31st December, 1937, there were two civil aircraft. There were two civil airports for landplanes, two for marine aircraft and one landing ground.

### HONG KONG

	1936.	1937.
<b>Finance</b>		
Total Civil Aviation Vote .. .. .	\$38,331 (£2,875)	\$70,148 (£5,261)

#### Regular Air Services

*Empire Service.*—Imperial Airways Ltd. continued to operate a weekly service from Hong Kong connecting with the main England–Australia route (*see* page 73). The service was operated to Penang *via* Saigon and Tourane until 18th December, after which it was operated to Bangkok *via* Udorn, Hanoi and Fort Bayard.

*Other Services.*—China National Aviation Corporation continued to call at Hong Kong on the thrice-weekly service between Shanghai and Canton.

Eurasia Aviation Corporation, another Chinese company, extended to Hong Kong their twice-weekly service from Peiping to Canton, on 29th June.

Pan-American Airways extended their weekly San Francisco–Manila service to Hong Kong, on 27th April.

**Aircraft, Personnel, etc.**—At 31st December, 1937, there were 8 civil aircraft, 23 private and 4 commercial pilots, and 5 ground engineers.

### MALAYA

	1936.	1937.
<b>Finance</b>		
Perak—Total Civil Aviation Vote .. .. .	\$25,450 (£2,969)	\$25,000 (£2,917)
Selangor—Subsidy to Kuala Lumpur Flying Club.	\$25,000 (£2,917)	\$25,000 (£2,917)
Straits Settlements—Total Civil Aviation Vote	\$88,000 (£10,267)	\$143,411 (£16,731)

#### Regular Air Services

*Wearne Bros. Ltd. (Singapore)*

Singapore–Kuala Lumpur–Penang (inaugurated on 28th June): Thrice weekly.

Singapore–Kuala Lumpur–Penang (from 27th September): Once daily on weekdays.

*Fleet.*—Two D.H. 89A (“Dragon Rapide”).

**Empire Service.**—The main England–Australia route (*see* page 70) was operated twice weekly through Malaya by Imperial Airways Ltd., in conjunction with Indian Trans-Continental Airways Ltd. (*see* under “India”), and Qantas Empire Airways Ltd. (*see* under “Commonwealth of Australia”). Stops in Malaya were made at Penang and Singapore, but the stop at Penang was discontinued after 18th December, when the terminus of the weekly service operated by Imperial Airways Ltd. from Hong Kong (*see* under “Hong Kong”) was transferred from Penang to Bangkok.

**Other Services.**—The Netherlands company, K.L.M., on their main service from Amsterdam to Batavia, continued to operate through Malaya, stops being made at Penang and Singapore. Services from the Netherlands East Indies to Singapore were operated by the Netherlands East Indies company, K.N.I.L.M.

**Light Aeroplane Clubs.**—The Royal Singapore Flying Club, the Kuala Lumpur Flying Club, the Penang Flying Club and the Perak Flying Club continued in operation throughout the year. Statistics relating to these clubs are given below.

	<i>Royal Singapore Flying Club.</i>	<i>Kuala Lumpur Flying Club.</i>	<i>Penang Flying Club.</i>	<i>Perak Flying Club.</i>
Members.. . . .	151	291	192	132
“A” licences gained during 1937	28	5	20	22
Hours flown during 1937	2,208	1,085	1,618	1,531

**Aircraft, Personnel, etc.**—On 31st December, 1937, in the Straits Settlements, there were 20 civil aircraft and 91 private pilots, and in the Federated Malay States, 14 civil aircraft and 46 private pilots. There were 3 state-owned land and marine aerodromes in the Straits Settlements, 9 state-owned and 3 private in the Federated Malay States, and 7 state-owned and 1 private in the Unfederated Malay States.

## BRITISH WEST INDIES

### Regular Air Services

Pan-American Airways operated the following services passing through the British West Indies :—

Miami (U.S.A.)–South America *via* St. Johns (Antigua)–Port of Spain (Trinidad)–Georgetown (British Guiana) : Weekly.

Miami (U.S.A.)–South America *via* San Juan (Porto Rico)–Port of Spain (Trinidad) : Weekly until July, then twice weekly.

Miami (U.S.A.)–Kingston (Jamaica)–Barranquilla (Colombia) : Twice weekly.

Kingston (Jamaica)–Santiago (Cuba)–Port-au-Prince (Haiti) : Weekly.

Nassau (Bahamas)–Miami (U.S.A.) : Daily from January to April, and afterwards twice weekly.

Belize (British Honduras)–Merida (Yucatan) : Weekly.

Transportes Aereos Centro Americanos Ltd., a Honduras company, operated weekly services from Belize to El Cayo (British Honduras) and to San Pedro Sula (Honduras), which connected with the services operated by the company in Central American countries.

The Compania Mexicana de Transportes Aereos de Chiapa operated a twice-weekly service between Chetumal (in the Mexican territory of Quintana Roo) and Belize and El Cayo in British Honduras.



## BERMUDA

	1936.	1937.
<b>Finance</b>	£	£
Air service subsidy .. .. .	1,810	3,320
Maintenance of airport .. .. .	400	—
Contribution toward cost of construction of the airport.	4,000	—
Aeronautical radio service.. .. .	—	700
Total Civil Aviation Vote .. .. .	£6,210	4,020

**Regular Air Services.**—On 16th June, Imperial Airways Ltd. and Pan American Airways inaugurated a twice-weekly service between Bermuda and New York, one return flight weekly being operated by each company. For a period of three months from 30th August, in order to cope with the seasonal tourist traffic, the frequency was increased to two return flights per week by each company. On 14th November, owing to unfavourable winter conditions at Port Washington, the United States' terminal was transferred to Baltimore for the winter season.

## SUDAN

(Anglo-Egyptian Condominium)

	1935-36.	1936-37.
<b>Finance</b>	£	£
Total Civil Aviation Vote .. .. .	5,000	19,000

**Regular Air Services**

*Empire Service.*—A twice-weekly landplane service from England to South Africa (see page 73) was operated by Imperial Airways Ltd. through the Sudan until 14th May, stops being made at Khartoum and Juba, and at Malakal and Kosti on request. After 14th May, the service was operated by "Empire" flying boats, and stops were made at Khartoum, at Malakal during October only, and at Kareima and Kosti by request. In June, an additional weekly flying boat service was inaugurated between England and Kisumu.

On the weekly Khartoum—West Africa service operated by Imperial Airways Ltd. (see page 73), stops in the Sudan were made at El Obeid, El Fasher and Geneina.

*Other Services.*—The Italian company, Ala Littoria S.A., operated a service from Italy to Italian East Africa, calling at Wadi Halfa, Khartoum and Kassala. The service was operated thrice weekly until July, when the frequency was increased to four times weekly.

**Aerodromes.**—On 31st December, 1937, there were 13 government-controlled aerodromes, 98 landing grounds and 37 recognised seaplane alighting areas.

(A) LONG DISTANCE FLIGHTS

British long distance record flights made in 1937 are tabulated below, details of the previous records being shown in italics in each case

(ii) Name of Pilot (and Category in case of F.A.I. records).	Aircraft.	Engine(s).	Route.	Route Distance in Miles (approx.).	F.A.I. Great Circle Distance (Km.).	Dates of Departure and Arrival.	Time taken from Start to Finish (including flying time and stops).	Average Speed in Km./hr. (F.A.I. record).
<b>AUSTRALIA—ENGLAND</b> (Solo Record)								
(Records over this route are not recognised by the F.A.I.)								
<i>Mr. H. L. Brook</i> .. ..	<i>Miles "Falcon"</i>	<i>de Havilland "Gipsy Major" 130 h.p.</i>	<i>Australia (Port Darwin) to England (Lympne).</i>	<i>9,000</i>	—	<i>24th March—31st March, 1935.</i>	<i>7 days, 19 hours, 50 minutes.</i>	—
Mr. H. F. Broadbent ..	de Havilland "Leopard Moth" (D.H. 85).	"Gipsy Major" 130 h.p.	Australia (Port Darwin) to England (Lympne).	9,825	—	27th April—3rd May, 1937.	6 days, 8 hours, 25 minutes.	—
Miss Jean Batten .. ..	Percival "Vega Gull."	de Havilland "Gipsy Six" 200 h.p.	Australia (Port Darwin) to England (Lympne).	9,900	—	19th October—24th October, 1937.	5 days, 18 hours, 15 minutes.	—
<b>ENGLAND (LONDON)—SOUTH AFRICA (CAPE TOWN)</b> (F.A.I. Capital-to-Capital recognised Record)								
<i>Mrs. J. A. Mollison</i> .. .. (1st Category record, not beaten in 1937.)	<i>Percival "Gull"</i>	<i>de Havilland "Gipsy Six" 200 h.p.</i>	<i>England (Grosvenor) to South Africa (Cape Town)</i>	<i>6,400</i>	<i>9,624</i>	<i>4th May—7th May, 1936.</i>	<i>3 days, 6 hours, 28 minutes.</i>	<i>122·65</i>
(i) Flying Officer A. E. Clouston Mrs. B. Kirby Green .. (2nd Category record established.)	de Havilland "Comet" (D.H. 88).	2 de Havilland "Gipsy Six" 205 h.p.	England (Croydon) to South Africa (Cape Town).	6,870	9,655·123	14th November—16th November, 1937.	1 day, 21 hours, 6 minutes.	214·083
<b>SOUTH AFRICA (CAPE TOWN)—ENGLAND (LONDON)</b> (F.A.I. Capital-to-Capital recognised Record)								
(iii) <i>Mrs. J. A. Mollison</i> .. .. (Unofficial record.)	<i>Percival "Gull"</i>	<i>de Havilland "Gipsy Six" 200 h.p.</i>	<i>South Africa (Cape Town) to England (Croydon).</i>	<i>7,385</i>	—	<i>10th May—15th May, 1936.</i>	<i>4 days, 16 hours, 17 minutes.</i>	—
Mr. H. L. Brook .. .. (1st Category record estab- lished.)	Percival "Gull"	de Havilland "Gipsy Six" 200 h.p.	South Africa (Cape Town) to England (Heston).	6,980	9,677·078	1st May—5th May, 1937.	4 days, 20 minutes.	100·454
(i) Flying Officer A. E. Clouston Mrs. B. Kirby Green .. (2nd Category record established.)	de Havilland "Comet" (D.H. 88).	2 de Havilland "Gipsy Six" 205 h.p.	South Africa (Cape Town) to England (Croydon).	7,135	9,655·123	18th November—20th November, 1937.	2 days, 9 hours, 23 minutes.	168·257

Notes.—(i) The complete flight from Croydon to Cape Town and back was carried out in 5 days, 17 hours, 28 minutes.  
(ii) 1st Category = solo flight. 2nd Category = flights with more than one person.  
(iii) F.A.I. record not set up, as the speed did not exceed the stipulated minimum of 100 Km./hr.

(B) ALTITUDE RECORD

On 29th June, 1937, Flight-Lieutenant M. J. Adam, in a Bristol "138" monoplane with a Bristol "Pegasus P.E.VI S" engine, flew to a height of 53,937 feet (16,440 metres), thus breaking the world's altitude record for aeroplanes (F.A.I. Class "C") set up by Squadron-Leader F. R. D. Swain, who reached a height of 49,944 feet (15,223 metres) on 28th September, 1936, in an aeroplane of similar type.



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